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ABSTRACT

Forty papers and responses from the 1979 annual meeting of the Philosophy of Education Society are reproduced in unabridged form, including the papers from both general and concurrent sessions. The Presidential Address discusses the concept of rational thinking. (JD)

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I

PRESIDENTIAL ADDRESS

PRESIDENTIAL ADDRESS: A CONCEPTION OF RATIONAL THINKING[1]

Robert H. Ennis
University of Illinois at Urbana-Champaign

Customarily a presidential address is an attempt to present a finished product. However, this one is a progress report. My continuing attemp to develop a conception of rational thinking is making headway but the task is so large, and the concomitant issues so numerous, that I can only tell you how things stand. I do invite you to join me in this enterprise.

As many of you know, I have for a long time been engaged in the study of critical thinking ability—what it is, how to teach it, and how to test for its presence. But there are weaknesses in limiting one's concerns to critical thinking, which I have earlier defined as "the correct assessing of statements" (1962, p. 83). When it is defined in this way, one's concern is literally limited to the act of judging what has been somehow propounded either by oneself or someone else. I say "literally" because the interests and activities of the Illinois Critical Thinking Project actually flowed over into a variety of other actions, including observing, inferring, conceiving alternatives, and offering a well-organized line of reasoning. I call these *contributory thinking activities,* because the thinker contributes more than evaluation to the result. Although we investigated these contributory activities, we (or at least I) always felt a bit uneasy in so doing. They are absolutely essential to the practice of good thinking and rational action, so we of the Illinois (now) Rational Thinking Project have by so changing the name declared ourselves to be officially and directly interested in them.

In this presentation I shall offer a fairly detailed conception of rational thinking by characterizing rational thinkers, assuming that rational thinking is the kind of thinking that rational thinkers do. I shall comment on parts of that conception in an attempt to give it some meaning and to indicate some things it does not do. Finally, I shall illustrate its application to topics in two areas, educational policy and educational test evaluation.

I. A ROUGH DELINEATION OF THE TASK

Rational thinking, not rational action is the focus, but I assume that rational thinking results in rational action, barring weakness of the will. In so assuming, I lean on Max Black's efforts to merge the theoretical and practical reasoning of the ancients in his paper, "Some Questions about Practical Reasoning" (1975, pp. 56-71). Like Black, I do not see the need for a special kind of reasoning concluding in an action as opposed to a proposition. If we again broaden our project, this time to include explicit concern with rational *action*, perhaps calling it the Illinois Rationality Project, there would be *overt recognition of the important practical problem of overcoming weakness of the will.* And there would then be additional room within our project for more psychological research than already is involved. It would be concerned with the correlates of, and ways to overcome (or induce), weakness of the will. This explicit further expansion is an option on which I seek advice.

I have assumed in conflict with Carl Hempel (in his paper, "Rational Action," 1962) that rationality requires morality. That is, I do not see how an act can be rational and immoral (really immoral—not just thought to be immoral), but I am not sure about this, and welcome reactions. If I am wrong that rationality requires morality, our task becomes easier, though still more than immense. And if I am right, I am saying less than many people will take me to be saying. One thing that I am not implying is that there are absolutes in morals, that is, that there exists a set of moral principles, perhaps yet undiscovered, on which all reasonable, fully-informed people will ultimately agree. I mean only to be making an assumption about our concepts of rationality and immorality. To assert of an action that it is both unqualifiedly rational and immoral does not make sense, it seems.

In labeling this presentation, "A Conception of Rational Thinking," I am employing John Rawls' distinction between "concept" and "conception." To set forth a concept is to offer a conceptual analysis which, though often difficult to develop, somehow lacks the "bite" of a conception. Rawls offered the following account of the concept of justice, for example:

> Institutions are just, when no arbitrary distinctions are made between persons in the assigning of basic rights and duties and when the rules determine a proper balance between competing claims to the advantages of social life. (1971, p. 5)

Though it seems to be a correct account of the concept of justice, one wants more. Rawls in the rest of the book attempts to provide more by offering and defending criteria to apply in order to determine whether justice obtains. These additional criteria constitute his conception of justice. Similarly, *rational thinking* is, or comes close to being, good thinking. That is my rough account of the concept, *rational thinking.* But regardless of how we decide about whether rationality implies rational action and morality, there is much more that needs to be said. Criteria are needed for determining whether a given piece of thinking is rational. Providing such criteria (that is, providing a conception) is my goal.

Of what use can such criteria be? They can be useful in planning a program of instruction in rational thinking, however it be organized; and in developing and using evaluation techniques for determining whether the program of instruction has succeeded. Tests based upon them can be used to discover developmental patterns and correlates of rational thinking as a whole and of its various aspects. The criteria can also be useful as guides to evaluating much thinking that goes on, in and out of education. In education they are applicable to the making and appraising of educational policy, to the doing and appraising of educational research, to teaching and its evaluation, and to evaluating evaluation itself. Even if I am wrong about my rough analysis of the concept of *rational thinking*, the criteria can serve these purposes, if they are criteria for good thinking.

II. THE CHARACTERIZATION OF RATIONAL THINKERS

This characterization of rational thinkers specifies three areas: proficiency, tendencies, and good judgment. The inclusion of the third area, good judgment, constitutes a frank admission that rational thinking cannot be so criterionized that judgments can be made mechanically.

Some of you will no doubt be struck, perhaps disappointed, by the looseness of the characterization. This looseness is evidenced by the inclusion of good judgment as a major area, and by such phrases as "roughly to the extent that," which permeate this characterization. This looseness is deliberate. After confronting thousands of examples in this area, and considering numerous attempts by others (and myself) to make rules that produce answers in real situations, I have become convinced that this is the only way. The characterization provides guides, rules of thumb, matters to be considered and weighed, and some desirable traits. But the result is not thereby mechanically determined. A judgment must be made.

Some might say that such vagueness defeats the grand purposes for which I have prepared this characterization. I think not. We of the Illinois Rational Thinking Project are making teaching materials and preparing to work out curricula, and we are making tests. The items mentioned are useful in approaching issues even though they do not automatically produce answers. But I cannot settle the matter here. The issue is too large and the time too short. Instead I shall simply make a start—by discussing the characterization and considering some examples.

In brief outline (one that I shall presently elaborate) I characterize as rational thinkers those who:

A. Are *proficient* at:
   1. *observing*;
   2. *inferring* an explanation, the point, the meaning, etc.;
   3. *generalizing*;
   4. *conceiving and stating* assumptions, alternatives, plans, predictions, definitions, etc.;
   5. *offering* a well-organized and well-formulated *line of reasoning*;
   6. *evaluating* authoritative-sounding statements, deductive reasoning, inductive reasoning, explanations, value statements, and definitions; and
   7. *detecting standard problems* and *realizing appropriate action*; and

B. Have the *tendency* to:
   1. *exercise the proficiency* they possess;
   2. take into account the *total situation*;
   3. be *well-informed*;
   4. demand *as much precision* as the subject matter permits;
   5. deal with the parts of a *complex situation in an orderly fashion*;
   6. consider seriously *other points of view* than one's own;
   7. *withhold* judgment when the evidence and/or reasons are insufficient;
   8. *take a position* (and *change the position*) when the evidence and reasons are sufficient to warrant so doing; and
   9. accept the necessity of *exercising informed judgment*; and

C. *Exercise good judgment*.

One important starting point in doing rational thinking is *observing*. This is the first proficiency for which I suggest guides, guides that may seem obvious to us, but still worth teaching. Note the use of qualifying words, like "by and large," "appropriate," and "sufficiently," and the use of words the application of which is not automatic, such as, "area of experience," "full possession," and "good condition." The use of these words makes very clear the need for good judgment in the application of these criteria.

A,1. Rational thinkers are proficient at *observing*: In order to do it well, and observer should by and large:

   a. be observing in an area of his or her experience (or field);
   b. be careful;
   c. be in full possession of his or her faculties;
   d. have no conflict of interest in making the observation;
   e. be skilled at observing the sort of thing observed, if skill is involved;
   f. have sensory equipment that is in sufficiently good condition;

g. be as precise as, and use as sophisticated technique as, is appropriate for the situation; and

h. avoid being influenced by preconceived notions about the outcome of the observation.

Note that this is not a list of necessary conditions for a successful, or correct observation. It is a list of desirable characteristics of an observer. The violation of one or more of these conditions would on the face of it count against the trustworthiness of the observation. Note again the need for good judgment in applying an "on-the-face-of-it count against" list.

Another type of starting point in reaching a decision or conclusion is authoritative-sounding-statements, which are considered later (under *A*,6,*a*), and include observation statements made by others.

A second mental activity that can be done rationally is *inferring* explanatory hypotheses, often based upon observed data. This is a basic skill and includes inferring a variety of key elements in thinking. Sometimes the product is so obvious that we do not elevate (or denigrate?) the result with the label, "hypothesis," but rather speak of it as something that we can see, as in, for example, "I see what you mean." If the result is controversial or not obvious, then it is usually best regarded as an explanatory hypothesis. (Criteria for judging explanatory hypotheses are given later under *A*,6,*c*,1 and *A*,6,*d*.)

A,*2*. Rational thinkers are proficient at *inferring* (or just seeing) explanatory hypotheses, including the following:

a. plausible *explanations* of a set of events or states of affairs; and

b. *interpretations* of the presentations of others. Such interpretations include claims that some given proposition constitutes:

1) *the point* being made—or at issue;
2) *the structure* of a line of reasoning;
3) *the meaning* of a statement;
4) *the meaning* of a term in a context;
5) *implicit reasons* (unstated reasons consciously or unconsciously used by the reasoner); and
6) *the implicit* (but intended) conclusions(s).

In one of my examples I shall illustrate the idea of regarding as an explanatory hypothesis an inference about what someone means.[2] That is, I shall treat my interpretation of the U.S. Supreme Court's Brown (1954) desegregation decision as an explanatory hypothesis.

I have urged elsewhere (1968) in conflict with Gilbert Harman, a prominent best-explanation theorist (1965, 1968, 1973), that not all generalization can be regarded as inference to best explanation. Hence, I list here as a separate kind of inferring, inferring to a generalization:

A,3. Rational thinkers are proficient at *generalizing*.

A fourth sort of activity of rational thinkers is related to the second, though even more creative—even a bit inventive. It is conceiving and stating certain key devices in thinking. Here the result is not an explanatory hypothesis—with one exception. (That one is reported definition, currently embedded in *A*,4,*f*, which would be put under the category *A*,2, if I were seeking a more elegant classification system.)

A,4. Rational thinkers are proficient at conceiving (or producing) and stating:

a. *implicit assumptions* (items needed as part of the structure of a line of reasoning, whether the reasoner used them or not)—(implicit assumptions fill the gaps in the strongest version of a line of reasoning, that is, the version that is most likely to justify the conclusion);
b. *other alternatives* than the one(s) under consideration;
c. reasonable *plans for conducting investigations*, including *controlled experiments* that are likely to rule out competing explanatory hypotheses;
d. *implications and conclusions*, regardless of whether the grounds or bases are accepted;
e. *predictions;* and
f. *definitions*, in accord with criteria under *A*,6,*f*.

Please note the distinction between two kinds of assumption-finding embodied in a separate listing of *A*,2,*b*,5 and *A*,4,*a*. The first, locating implicit reasons, is concerned with finding out something that was in the assumer's mental operations. The claim that a person had a particular implicit reason is an explanatory hypothesis and is judged primarily by its ability best to explain the data (e.g., the things the person said). The second kind of assumption-finding is the offering of something that a line of reasoning needs in order that it be as good as it can be, regardless of what the assumer was thinking. I have previously labeled these two types of assumptions "psychological" and "logical" assumptions (1969a, p. 398).

A perhaps unnoticed feature of this fourth activity is its inclusion of what I have elsewhere called "suppositional ability" (1971, p. 127) as part of *d*: "regardless of whether the grounds or bases are accepted." I am here emphasizing the ability to reason, regardless of whether one believes the hypothesis or assumptions from which the reasoning proceeds. This is the sort of thing that Piaget in *Judgment and Reasoning in the Child* apparently claimed (I think falsely) that children under 11-12 cannot do (1959, p. 252).

Such proficiency in a particular situation is necessary for open-mindedness. One must think suppositionally in order to entertain a point of view with which one disagrees and see where it leads.

A fifth contributory rational thinking activity involves putting it all together in a high-quality presentation. Since this requires talking and writing, some might want to say that this goes beyond thinking. Perhaps, but given the ultimate practical purpose, I do not want to try to separate thinking from setting forth one's thoughts, a separation that, though generally conceptually possible (I just did it), seems undesirable practically. Furthermore, the two are very close, perhaps identical, in those common cases where one thinks and talks at the same time, saying what one is thinking.

A,5. Rational thinkers are proficient at *offering* a well-organized, well-formulated line of reasoning, orally and in writing:

a. showing sensitivity to its weaknesses and existing challenges; and

b. exhibiting awareness of its overall strength.

The previous five activities require monitoring in the form of evaluation of the product and of the bases upon which one operates. This evaluation activity is critical thinking. I organize the presentation of criteria for evaluation in accord with the types of statements evaluated and the kinds of support available, beginning with the starting point for much of what we believe: authoritative-sounding statements made by others. These include statements by reputed authorities, as well as statements by a friend reporting some occurence in the next room. Observation statements (by someone other than oneself) are included, since they are authoritative-sounding statements.[3] The introductory language ("roughly to the extent that") should make it clear that this is not a list of necessary conditions; again good judgment is required.[4] Thusly qualified, the list of items is difficult to dispute, though eminently worthy of attention, judging by what I daily see and read.

A,6,a. Rational thinkers are proficient at *evaluating authoritative-sounding statements.* A person's authoritative statement is believable roughly to the extent that:

(1) the statement is in the person's area of experience (or field) and the person has theoretical understanding of that area (or field);

(2) the person gave the statement careful consideration;

(3) the person was in full possession of his or her faculties when making the statement;

(4) the person had no conflict of interest in making the statement;

(5) the person has a reputation for being honest and correct about the sort of thing considered;

(6) the persons's reputation for being honest and correct could be affected by the statement, and the person was aware of this fact when making the statement;

(7) established procedures, if any exist, were used in arriving at the statement;

(8) the person is not in disagreement with others who satisfy this set of criteria;

(9) the statement is not in conflict with what we otherwise have good reason to believe;

(10) the statement is close to being a statement of direct observation, as opposed to being an inference;

(further, *if the statement is an observation statement*)

(13) the statement, if based on a written record, is such that:
  (a) the record was made at or close to the time of observation;
  (b) the record was made by the person making the observation;
  (c) the record was made by the person making the observation statement; and
  (d) the statement is believed by the person making the statement to be correct—either because the statement maker so believed at the time the record was made, or believes that it was the record-maker's habit to make correct records;
(14) the statement is corroborated;
(15) the statement is believed by its maker to be corroboratable;
(16) the observation conditions provided good access;
(17) high-quality, well-understood observation technology, if helpful, was used skillfully and with attention given to its limitations; and
(18) the observer
  (a) has a reputation for honesty and correctness;
  (b) believed that his or her reputation for honesty and correctness could be affected by the observation report;
  (c) believed that the observation report was easily checkable by someone else, and
  (d) satisfied the criteria in *A*, 1.

Given a set of starting points, including acceptable authoritative-sounding statements and observations, reasoning from them can be evaluated. I have divided this reasoning into three types, deductive, inductive, and value reasoning, realizing that they are interdependent. The nature of this interdependence is a vast topic, but for present purposes I shall only indicate it in considering each of these three types of reasoning.

Deductive reasoning is that in which the conclusion is supposed to follow necessarily from the reasons given. Loose deductive reasoning contains various qualifiers circumspectly inserted implicitly or explicitly (e.g., "generally" in a reason, "probably" in a conclusion) and would be ordinary deductive reasoning with the qualifiers (whether implicit or explicit) removed. Judgments about loose deductive reasoning require, in addition to deductive prowess, an ability to appraise the situation and decide whether the conclusion goes through in the given case.[5]

The elaborate and elegant systems of symbolic deductive logic taught in logic courses (there are fewer nowadays than formerly), and studied by people who call themselves logicians, have significant problems for our purposes. They are too elaborate; they avoid the most difficult part of applying deductive logic to practical cases—translating in and out of the system; and they seem to twist the meaning of "if," "or," and "some."[6] But simple deductive logic plays a role in much of the rational thinking that we do. This role is not primarily in the direct necessary relationship from reasons to desired conclusion, rather it is in a loosened relationship between reasons and conclusions; it is in inference to the best explanation; and it is in assumption-finding, common candidates for assumptions and implicit reasons being items that would fill the gap in a (loose) deductive argument.[7]

A,6,b. Rational thinkers are proficient at *evaluating deductive (and loose deductive reasoning.* One basic error to avoid in deductive reasoning is treating a necessary—or sufficient—condition as a sufficient—or necessary—condition, respectively.[8]

Whereas deductive reasoning can have as its conclusion any kind of statement—empirical, value, tautologous, etc., the next type of reasoning, Inductive reasoning, is a way of supporting only empirical statements. It is, I believe, the fourth of four ways of supporting empirical statements, the other three being observation, taking someone else's word, and deduction. This fourth way is inductive inference and includes inference to the best explanation and generalization.

A,6,c. Rational thinkers are proficient at *evaluating inductive reasoning:*[9]

1) *to explanatory hypotheses,* whether the conclusion be singular or general. An explanatory hypothesis is justified to the extent that:
    a) it would account for a bulk and variety of reliable data;
    b) it itself fits into a satisfactory system of knowledge;
    c) it is not inconsistent with any evidence;
    d) its competitors are inconsistent with evidence (controlled experiments give such evidence an opportunity to appear); and
    e) it is simpler than its competitors.
2) *to generalizations* that are not necessarily explanatory. An empirical generalization is justified to the extent that:
    a) there is a bulk of reliable instances of it;
    b) it fits into a satisfactory system of knwoledge; and
    c) there is a variety of instances consonant with the degree of variety in the population covered by the generalization.
        (1) One standard way to seek variety within a limited population is through the use of procedures of unbiased sampling:
            (a) a pure random sample is unbiased;
            (b) a systematic sample is unbiased to the extent that a careful investigation fails to reveal a relevant cycle or trend followed by the sampling procedure;
            (c) stratification of a population on relevant variables (if known) and unbiased sampling within the strata is likely to be more efficient than a pure random sample or a pure systematic sample;
            (d) an unbiased sampling of clusters of the population and unbiased sampling (or complete enumeration)

within the clusters is likely to be a workable way of sampling when access to separate individual units is difficult.

- (2) Given an unlimited population, or one which is not amenable to sampling:
    - *(a)* a portion can be selected for sampling to determine the nature of that portion;
    - *(b)* but in any case an extension is required beyond known portions of the population in which one has an interest, such extension ("the inductive leap") to be based upon background knowledge and context.

3) (Often generalizations receive support, both as explanatory hypotheses and as empirical generalizations.)
4) (Generally the degree of justification of inferring an empirical conclusion is weakened to the extent that the person doing the inferring is ignorant of the subject matter or area of concern.)

Explanations are another type of product of rational thought to be evaluated, and attention to the account-for type of explanation is particularly needed because of the role played by such explanations in inference to the best explanation, a crucial process in rational thinking. Account-for explanations are those that attempt to account for some occurrence or state of affairs. The proposed criteria are admittedly incomplete (as indicated by the words "only if" under *A*, 6, *d*, 2), and must be regarded as provisionally offered.[10] Much philosophical work yet needs to be done here. Please realize that I have assumed all account-for explanation to be causal. In so doing (in view of my best explanation interpretation of interpretation) I commit myself to the view espoused by Donald Davidson (1963) (and others) that reasons can be causes.

In order to avoid confusion with account-for explanation, I have distinguished justification explanation from it. Justification explanation is explanation that attempts to prove or establish something that in the context is in doubt. Account-for explanation on the other hand assumes the explanandum to be true and attempts to account for it. Since evaluating justification explanation is the topic of most of this total section on evaluation, I only mention it here to distinguish it from account-for explanation.[11]

A,6,*d*. Rational thinkers are proficient at *evaluating reason-giving explanations:*

1) One occurrence or state of affairs accounts for another if the following hold:
    - *a)* given the other conditions, the first was sufficient for the second; and

b) the first is appropriately deemed responsible for the other.

2) A generalization accounts for an event or state of affairs ("*b*") only if the relationship between *b* and another event or state of affairs ("*a*"), which accounts for *b*, can be subsumed under the generalization.

3) One set of reasons and evidence ("*c*") explains why someone would be justified in believing a proposition ("*d*"), if *c* establishes *d*.

A third kind of reasoning to be evaluated is that leading to value statements, commonly called "value judgments." Here, too, I wish that I could say more, but shall offer only a few relatively safe criteria. This is better than nothing, but less than I should like to provide.

A,6,e. Evaluating value statements:

1) The empirical bases of value statements should be correct.

2) A value statement should be consistent with acceptable higher-level value propositions, if there be any. In case of conflict it should be consistent with the most important one(s), if there be such.[12]

3) The consequences of acting in accord with the value statement should be more acceptable than those of not acting in accord with the value statement.

Under the heading "evaluation" I have considered some starting points in reasoning and three types of reasoning. The next concern is a product that is essential to clarity and understanding: definition.

Defining is best viewed as an act that has some form.[13] Three rather different acts are commonly labeled "definition": reporting the meaning of a term; stipulating a meaning for a term; and attaching criteria to a term without giving its meaning. Using Rawl's concept-conception terminology, reporting the meaning is explaining an existing concept, stipulating a meaning is stipulating that a particular word shall express some concept, and attaching criteria to a term is offering a conception to go with a concept. A reported definition is judged by the criteria for an explanatory hypothesis. A stipulated definition is judged for its convenience, though it sometimes be controversial whose convenience is to be served and what constitutes convenience. Criteria-attachment definition is judged on the basis of the justification for attaching the criteria to the concept expressed by the term in the context.

A common error is to behave as if a defense of one type of act constitutes a defense of another type of act, for example, treating convenience as a ground for criteria attachment. Another common error is to assume that one kind of definitional act has been perfomed when actually a different one has been performed. A third common error is to assume that people are more flexible than they are, inflexibility often resulting in a stipulated definition being accepted and then treated as a justified criteria-attachment definition. I call this third error "impact equivocation" and later on shall give some examples.

Each of these three definitional acts can be performed in any one of a variety of forms, depending on the context, the term being defined, and the audience. I start by listing several definition forms and then list the acts.

A,6,f. Rational thinkers are proficient at *evaluating definitions:*

1) *Forms:*

a) *Equivalence forms:* Equivalence between defined term and definition[14] is desirable. Sometimes adjustments must be made in order to produce something to which a definition can be equivalent (e.g., converting an adjective or adverb into its related noun).

(1) *Classification form:* For precision and complete exhibition of the coverage of a noun, classification definition is appropriate. It provides a general class and distinguishing features, each of which is a necessary condition for the application of the term. For most terms in everyday use, the precision of classification definition constitutes a frequently useful oversimplification.

(2) *Range form:* In range form, which also is appropriate for nouns, a general class is provided, but the additional features, instead of all specifying necessary conditions, characterize. That is, they constitute a set of conditions most of which hold of any given case properly labeled by the noun. For most nouns in everyday use the range form gives the most accurate portrayal of the meaning.[15]

(3) *Equivalent-expression form:* Here one embeds the defined term in a larger expression and presents another expression that is equivalent to the one containing the term. The danger is that, since someone must still infer the meaning of the defined term, a mistaken inference can be drawn.

b) *Nonequivalence forms:* Provision of concrete interpretation is generally incompatible with equivalence in the same definition, although concrete interpretation and equivalence can be provided in different definitions.

(1) *Example and nonexample form:* Examples and nonexamples should be informative, examples by being central cases, and nonexamples by being fairly close to being cases, but instructively not so.

(2) *Operational definition:* An operational definition specifies a condition institutable by an investigator, under which condition there holds a specified relation between an observation report and the application of the term. An operational definition provides an accurate but incomplete depiction of the meaning of a term.[16]

2) *Acts of defining:* Although the following three acts are conceptually distinct, various combinations of these acts are possible.
   - *a)* *Reported definition:* The most common act is reporting a meaning. Here one tries to give an accurate representation of the usage of a word for some individual, or more commonly, for some group, subculture, culture, or language community. Since usage changes over time, so do reported definitions. They can be correct or incorrect.
   - *b)* *Stipulated definition:* Here one stipulates a meaning of a term for a given situation or set of situations. The criterion is convenience.
   - *c)* *Setting forth a conception:* Here one attaches criteria to a term that often in the situation is a pro or con term. The criteria do not give the meaning of the term; but they tell how the term should be applied in the view of the person giving this kind of definition. Acceptance of these criteria is not simply a matter of convenience. The criteria, since their acceptance often implicitly embodies value judgments, can be justified or unjustified.

That completes the list of evaluation proficiences, and in fact the logically-ordered part of the list of proficiencies. I should next like to offer a supplemental set of proficiencies, somewhat comparable to the informal fallacies of logic. I have found in my experience a series of fairly standard mistakes in thinking continually recurring in a variety of contexts. And I have worked out and learned from other people some fairly standard moves to make in response to these standard problems. This last set of proficiencies is even less theoretically organized than the first six but for practical purposes, this part of the presentation will be useful to many people.

A,7. Rational thinkers are proficient at *detecting standard problems and realizing appropriate action* (including such problems as the following and such standard action as is indicated):

- *a.* *Lack of offered reasons and/or clear connections* between offered reasons and conclusions: Ask "Why?"; "How does that justify it?"
- *b.* *Inconsistency:* Point out the inconsistency and ask whether the person meant to say both things.
- *c.* *Equivocation fallacy* (the exploitation in a line of reasoning of a shift in meaning of a key term): Lay out a rendition of the line of reasoning on each interpretation of the key term (or each combination of interpretations of the key terms) and evaluate each rendition; alternatively, one might show that a key term is being used in one sense at one point, in a different sense at another point (these contentions should be judged as explanatory hypotheses), and that the line of reasoning depends on the two senses being the same.
- *d.* *Impact equivocation fallacy* (using a term in such a way that there is

a good chance that one's audience will interpret the term in a different way in applying the conclusion): offer a counter-example to a proposition that results from interpreting the terms in their ordinary sense; encourage flexibility by reminding the audience of the special meaning of the terms perhaps by using it in the special way in a context in which its use in the ordinary way would be strange; state both meanings and urge avoidance of the consequent invitation to equivocation.

e. *A false starting point* in a line of reasoning: Show it to be false (but see whether the conclusion might be justified in other ways).

f. The existence of a *plausible competing explanation:* Point out the alternative; design and implement controlled experiments that test the hypotheses.

g. *Unclear concepts and statements:* Ask for a definition; ask for an example and a nonexample, and then if necessary, ask why the reply constitutes an example or nonexample; ask, "What does that mean?"; ask "Could you say some more about that?"; ask what might count as evidence in support of the statement, and in opposition to the statement; ask what the statement implies in some real situation; ask what someone might do who believed the statement as opposed to what that person might do if he or she did not believe the statement.

h. *Unnecessary request for a reported definition of a term:* Say that you mean by the term whatever the requester means (if you think you do); if the requester protests that he or she does not mean anything by the term, suggest a few everyday sentences containing the term, sentences that the requester would understand and employ.

i. *Failure to join issue:* Correct the misunderstanding perhaps by noting that the parties are using a key term in different ways (an explanatory hypothesis) or by suggesting that they seem to be defending different statements (also an explanatory hypothesis).

j. *Circularity:* Ask what progress of the sort needed in the situation is made.

k. *Irrelevance:* Ask what bearing the item has on the issue or question.

l. *Bandwagon appeals:* Ask why others' doing something is a good reason.

m. *Namecalling and glittering language:* Ask why such terms apply in the situation; reject as reasons their undefended use.

n. *Slippery slope moves* (alleging that since there is no sharp line between two sorts of thing, there is no difference): Point out clear cases of each side of the distinction and ask whether it is reasonable to deny the labeling; suggest that the approach assumes that lack of a sharp line implies no difference, and then offer a counterexample to that assumption (such as the difference between being bald and having a full head of hair).

That ends the perhaps overwhelming list of proficiency items. I do not ask you to grasp it all at this one sitting, but hope that I have conveyed a general picture and that you have noted some particular features relevant to your work. But there is more to come. Proficiency is not enough. There must be a tendency to exercise the proficiency. Furthermore, there are a number of other tendencies that are in a way included in the list of proficiencies, but are so significant that they are worthy of separate attention. I hope you will agree. Lastly, though also in a way redundant, I offer as the third major item in the conception, the exercise of good judgment. Although one cannot be proficient without exercising good judgment, the criteria listed under the proficiencies do require good judgment for their application. This fact is so important that I give it special attention.

B. Rational thinkers are also characterized by a *tendency* to:

1. *exercise the proficiency* that they possess;
2. take into account the *total situation;*
3. be *well-informed;*
4. demand *as much precision* as the subject matter permits;
5. deal with the parts of a *complex situation in an orderly fashion,* often one part at a time (but keeping the whole situation in mind when dealing with a part);
6. consider seriously *other points of view* than their own;
7. *withhold judgment* when the evidence and/or reasons are insufficient;
8. *take a position and change the position* when the evidence and reasons are sufficient to warrant so doing; and
9. accept the necessity of *exercising informed judgment.*

C. Rational thinkers are also characterized by the *exercise of good judgment.*

III. APPLICATION TO EXAMPLES

A. Segregation Editorial

Although I have managed to list these items separately, their application is generally interdependent. The more deeply one examines a particular example, the more clearly can one see this fact. I shall begin with an example from the discussion of segregation in United States schools. The example exhibits observing; inferring meaning, implicit reasons, and reported definitions (and thus inferring to best explanations); conceiving and stating an implication; thinking in terms of necessary and sufficient conditions; offering a line of reasoning (showing sensitivity to its weaknesses); evaluating an authoritative-sounding statement; evaluating inferences to best explanations; being informed; avoiding the confounding of a stipulated definition and a criteria-attachment definition; detecting a possible equivocation and impact equivocation and realizing appropriate counteraction; taking into account the total situation;

dealing with the parts of a complex situation in an orderly fashion; demanding as much precision as the subject matter admits; considering seriously a point of view other than one's own; exercising judgment; and the interdependence of these things. Perhaps some of you are wondering how all that can be packed into one example. Join me and see.

A newpaper editorial entitled, "Jim Crow, long outlawed, still hangs on in Chicago," appeared recently in an Illinois newspaper, *The Morning Courier* (1978, p. 38). The editorial commenced with a reference to the Brown (1954) decision and continued by challenging "segregated" schools in Chicago:

> It's a long time since 1954 and the United States Supreme Court decision declaring state laws providing separate but equal schools unconstitutional.
>
> • • •
>
> Illinois children affected by school desegregation efforts, or the lack of them, today were not even alive at the time of that decision.
>
> • • •
>
> If [Illinois Board of Education] members stand up to Chicago, they are justified in doing so, and would deserve the support of those who believe segregated schools are bad for children and bad for America.
>
> • • •
>
> There are a whole set of reasons—some racist, others not—that have brought about this situation.
>
> But it exists. And what it means is that nearly 25 years after the Brown decision, whatever the legality of the situation, white and black children in the Chicago area in effect are largely attending schools almost as segregated as when Jim Crow laws and practices prevailed over much of America.

Has the equivocation fallacy been committed?

That this is a difficult question to answer results from the existence of a number of things about which we cannot be certain, and the existence of different ways of construing the evidence. We must operate on the basis of the best-established hypotheses that we can find about what the writers involved meant, and about the impact on the readers; and make a somewhat tentative judgment on these grounds. One thing is clear, however: it would be illegitimate for the editorial to base its conclusion on the Supreme Court's decision, if it uses the word "segregation' in the conclusion in a different and less restrictive sense from that which the Supreme Court used in rendering its judgment. To so shift the meaning would be in effect to apply a different judgment from that delivered by the Supreme Court and to commit the equivocation fallacy.

A first hypothesis is that the editorial intended the Court's 1954 segregation decision to be used to support the contention that the Chicago situation is illegal. This hypothesis seems to be the best explanation of the title given to the editorial, "Jim Crow, long outlawed, still hangs on in Chicago." How else could we explain that title? There might be another explanation, but what could it be? Another piece of evidence (though weaker I believe) in support of the hypothesis is the last sentence in the last quoted paragraph. This sentence suggests that the current situation in Chicago is inconsistent with the 25-year-old (at the time of writing the editorial) Brown decision. It also clearly declares the Chicago schools "segregated," segregation having been outlawed, as most people view things, in the Brown 1954 decision. The phrase that weakens this sentence as a piece of evidence for the first hypothesis is, "whatever the legality of the situation." One might explain this phrase by suggesting that either the writer was too bright to get caught in an outright equivocation, or that the writer was just inconsistent. If neither of these explanations hold, then at least many readers will ignore this qualification and still be led to think that the Brown 1954 case is being used against the situation in Chicago (indicating a danger of impact equivocation). In Chicago, at the present time, there are schools that are almost exclusively attended by children of only one race. these schools fit the racial difference in housing patterns in this large city.

Now *if* the first hypothesis is correct, and if the Supreme Court actually used 'segregation' in a different sense from that in which the editorial is justified in labeling the Chicago situation as segregation, then there is an equivocation problem. There are essentially two different senses of 'segregation' in our contemporary culture, I suspect. The first, because of its consistency with what is in the dictionary, is the basic meaning that people carry around with them, and accompanying which they have formed some basic attitudes. The second, I believe, is an extension of the English language of say, 50 years ago, an extension introduced by means of the phrase, '*de facto* segregation,' the '*de facto*' part now having been dropped, as in the editorial quoted. The issue then becomes this: Did the Court prohibit segregation in the first sense, but the editorial apply it correctly to Chicago in the second sense?

The two senses of 'segregation' that I have in mind are roughly these:

1. The separation of a group with characteristic A from a group with characteristic B, the intention being to separate them because they have these different characteristics.
2. The separateness of a group with characteristic A from a group with characteristic B, whatever the reason for the separateness.

All cases of segregation of Sense 1 would also be cases of segregation in Sense 2, but not vice versa. Satisfying the definition of 'segregation' in Sense 2 is a necessary but not sufficient condition for satisfying the definition of 'segregation' in Sense 1. Sense 1 has an additional necessary condition, one concerning intention.

A second hypothesis is that the U.S. Supreme Court had Sense 1 in mind when it prohibited racial segregation in Brown *vs.* Board of Education of Topeka (1954). Otherwise I find it hard to explain the first two of the three following passages from the Court's unanimous opinion in that case. The first passage states the problem and the second appears to give the primary reason in support of the decision. (The third is from the concluding paragraph of the Court's opinion):

> 1. We come then to the question presented: Does segregation of children in public schools solely on the basis of race, even though the physical facilities and other 'tangible' factors may be equal, deprive the children of the minority group of equal educational opportunities? We believe that it does.
>
> 2. To separate them [children in grade and high schools] from others of similar age and qualifications solely because of their race generates a feeling of inferiority as to their status in the community that may affect their hearts and minds in a way unlikely ever to be undone. The effect of this separation was well stated by a finding in the Kansas case.... 'The policy of separating the races is usually interpreted as denoting the inferiority of the Negro group. A sense of inferiority affects the motivation of the child to learn. Segregation with the sanction of law, therefore, has a tendency to [retard] the educational and mental development of Negro children and to deprive them of some of the benefits they would receive in a racial[ly] integrated school system.' Whatever may have been the extent of psychological knowledge at the time of *Plessy vs. Ferguson*, this finding is amply supported by modern authority.
>
> 3. We conclude that in the field of public education the doctrine of 'separate but equal' has no place. Separate educational facilities are inherently unequal.

The hypothesis that the Court meant to be prohibiting segregation in Sense 1 would explain why the Court stated the problem as it did, and in particular used the phrase, "solely on the basis of race." The hypothesis that the Court meant to prohibit segregation in Sense 2 does not explain why the Court used the word "solely" (James Conant made a similar point in his *Slums and Suburbs*, 1961, p. 28).

The hypothesis is also supported by the kind of evidence that the Court appeared to think most relevant, as indicated in the second passage. That the Court meant to be prohibiting segregation in Sense 1 explains why it limited the indicated evidence to the consequences of separating them "solely because of their race" and of "the policy of separating the races," rather than including in the body of the opinion consequences of just being in different places.

The third passage, on the other hand, contains a sentence that is most easily explained by a Sense-2, competing hypothesis. The sentence is, "Separate educational facilities are inherently unequal." Separate educational facilities it would seem, are segregated in Sense 2. A plausible way to handle this problem is to regard this sentence, which comes in the concluding paragraph of the opinion, as oversimplified for rhetorical purposes, and not indicative of the literal meaning of the Court. Now it is clear why detecting equivocation is difficult, if it was not already so. Here (as with the editorial's phrase, "whatever the legality of the situation") is some apparent counter-evidence that must either count against the hypothesis or be explained away, so to speak. It seems more plausible to me to explain away the key sentence in the third passage (in the way I suggested) and to accept the hypothesis on the basis of its good fit with the first and second passages than to accept the alternative hypothesis (which is that the Court was outlawing segregation in Sense 2) and to try to explain away the first and second passages. This judgment by me is partly on the grounds of simplicity, and partly on the grounds that legal people take the more specific statement to be more indicative of intention than the less specific one. Note here the need to be informed about the area of concern.

Another challenge to the hypothesis might be based upon the fact that the Court used "solely" in the first passage. If the court used 'segregation' in Sense 1, then it would be almost redundant to add "solely." But this possibility of redundance is not in conflict with the hypothesis. It is very common for legal people to be redundant (e.g., "Cease and desist").

Note again the need for being informed about the area of concern. But I am not a legal expert and might have overlooked some crucial matters.

Now if the editorial writer intended to lean on the Supreme Court opinion in Brown (the first hypothesis) and if the second hypothesis is correct, then the writer has committed the equivocation fallacy, if the third hypothesis is correct: that the writer was using Sense 2 of 'segregation.' This hypothesis is strongly supported by the situation in Chicago and by what is being said about it, in and out of the editorial.

The percentage distribution of students explains why the writer would believe that there is segregation in Sense 2, and the writer's using the term in Sense 2 would explain why there is no complaining that the authorities have *assigned* students to existing schools *on the basis* of their race. Furthermore, the fact that people currently are focusing on segregation in Sense 2 makes it more likely that this is the concern of the editorial. Editorials generally express concern about what other people express concern about. (I have just employed the first two criteria for explanatory hypothesis.)

In sum then, I have offered three hypotheses, one concerning the connection that the editorial claims to exist between the Court's 1954 decision and the situation in Chicago, a second concerning the sense in which the Court used 'segregation,' and a third concerning the sense in which the editorial used the term 'segregation' in application to the situation in Chicago. If the hypotheses are correct, then an equivocation problem exists in the editorial line of reasoning.

I am not contending that the editorial is wrong (or right) in condemning the Chicago school system. I am only suggesting that the editorial line of reasoning here is weak because of an equivocal use of the term 'segregation.'

But it really is not my primary purpose to show that there is equivocation here. To do that, if it can be done, would require much further treatment, for there are many avenues of exchange that I have left untouched concerning this particular editorial. By employing the second-listed counterequivocation strategy, I hope to have accomplished the exhibition of what the fallacy would be like in this important situation, so that we all can guard against it in discussions of educational policy, limiting our reasons in condemnation and defense of the Chicago situation and other situations to good ones, and in particular making sure that equivocation is not a basis of decision making.

Suppose, however, that we decide that the first hypothesis is not acceptable. Then the fallacy of equivocation would not have been shown to have been committed. Has the writer been exonerated and should we take his or her word on the alleged impropriety of the Chicago situation?

I am not ready to exonerate the writer. Even if he or she did not mean to say that the Brown decision gives support to a claim of illegality in the Chicago segregation (Sense 2) situation, there is a real danger that people will take it that way. Very few people actually remember the language and details of the Brown decision and some, contrary to a reasonable application of the criteria for authoritative-sounding pronouncements, will accept the editorial writer's apparent opinion, as suggested especially in the headline ("Jim Crow, long outlawed, still hangs on in Chicago"), on the ground that such a writer should know what he or she is talking about. Since the writer should know that some will in fact take his or her word on this, I believe that the writer should have been more circumsepect. (Or perhaps it was the fault of the headline writer, to introduce another complication.)

But beyond the possible authority problem there is another, the fallacy of impact equivocation. (See *A*, 7, d.) In this case 'segregation' was implicitly stipulated or assumed by the writer to mean segregation in Sense 2. If it is a fact that people will tend to revert to the ordinary meaning of 'segregation' (which I think is Sense 1), then there is danger of impact equivocation. One commits the fallacy of impact equivocation if one uses terms in special ways without taking adequate precautions to see to it that the audience (which sometimes includes oneself) will not be fooled into applying a proppsition in the ordinary sense of its constituent terms, when what has been established is a proposition using one or more of the terms in their special sense. If most people do in fact apply and (down deep) interpret the term 'segregation' in Sense 1, then the editorial at least commits the fallacy of impact equivocation.

As you can see, there is even more to be said about the 'segregation' editorial. That is the way with real examples, but I must stop somewhere. Fair appraising is not simple to do nor simple in result. I trust that you noticed in the discussion all the rational thinking processes I claimed would be there.

B. Test Reliability

Evaluation instruments are employed for a variety of purposes, including teaching, administration, research, policy establishment, and curriculum planning and appraisal. A key concept in appraising evaluation instruments is *reliability*. But in its employment, there is at least one invitation to equivocation, exacerbated by a frequently-attached criterion for the determination of reliability.

In everyday usage, *reliable* things are things on which we can depend to get things right. My Webster's dictionary gives the following as its definition of 'reliable': "suitable or fit to be relied on; trustworthy." But in the terminology of testing, however, reliability simply means consistency. As Lee Cronbach put it, "reliability always refers to consistency throughout a series of measurements (1960, p. 126)." According to this concept of reliability, a gyrocompass that is initially set with an error of plus 90 degrees is quite reliable if it provides and continues to provide such directional information (e.g., reads north when pointed west, reads east when pointed north, etc.). It would also be reliable if it consistently gave information on the degree of brightness in the area, and no directional information at all. In testing terminology it would be invalid, but reliable (validity being the quality of testing what a test is supposed to be testing for). All that matters for reliability in the technical sense is consistency. Reliability in the technical sense is a necessary, but not sufficient condition for reliability in the ordinary sense.

The danger is that the public and unsophisticated professionals will misunderstand a claim that a test is reliable. A claim made in accord with a correct reported definition of the technical sense of "reliable" might be accepted and interpreted in accord with the dictionary's reported definition, and the test then receive acceptance that it does not deserve. That is, it might be a consistent measure of something other than is indicated by its name, but an untrustworthy *measure* of the latter. Although test specialists are widely aware of this danger, the dissemination of facts about tests to the unsophisticated often neglects mention of this misleading tendency. This neglect is at least usually a sin of omission. Experts often unwittingly (though sometimes arrogantly) assume that their technical meanings are the correct meanings for terms, inviting impact equivocation.

Unfortunately, it is particularly inviting to test specialists to present reliability information, rather than information on test validity, because it is generally much easier to gather numbers on reliability than on validity, and because the numbers that can be gathered on reliability are higher than the numbers that can be secured on validity (if the latter can be secured at all). The higher the numbers the better the test looks. Test specialists are generally trying to build tests that will attract users, so they make decisions promoting reliability at the expense of validity. When I served as a consultant and item writer for Educational Testing Service, a large testing organization, I found an overwhelming concern with reliability. Even test specialists and teachers in the employ of a school board will sometimes want to recommend tests, and if they recommend tests that do not appear to be good tests, the justification of their recommendations (and even the existence of the test specialists) will be questioned. So it is to their interest also to seek high numbers. Result: a temptation to overemphasize reliability all along the line, and thus a stronger invitation to some form of equivocation.

Note that I am here employing one of the criteria for authorities mentioned earlier—the desirability of lack of conflict of interest. We must be wary of the recommendations of people with conflict of interest. I point this out here in order to reinforce my contention that the items in the conception of rational thinking that I present are interdependent and interactive.

But another and less widely realized problem with reliability is yet to come. It so happens that a frequently-used index for estimating reliability is not an index of consistency of repeated measure, but rather an index of internal consistency. The heavily-used indices of reliability, the Kuder-Richardson formulas, are indices of *the extent to which every item correlates with every other item* on a *single administration of the test.* The more homogeneous the items the higher this coefficient of internal consistency. Hence in choosing a test of, say, rational thinking, a heterogeneous trait, one is pressured by the use of Kuder-Richardson reliabilities to accept tests that have eliminated nonconformist items (which validly test for significant but disparate elements of rational thinking) in favor of items that are just like the rest.

So, a misleading criterion is frequently used to determine reliability (in its technical sense), thus compounding the problem. Unfortunately, this aggravation of the problem usually goes unadvertised by test specialists.

When a line of reasoning in support of the use of a test gives as the reliability the result of an item-conformist internal-consistency Kuder-Richardson Formula, there at least is a danger, as a result of using this criterion, that the pursuit of high reliability conflicts with the pursuit of test validity for heterogeneous traits. There also is the danger that the reliability, so determined, will be interpreted as reliability in the ordinary sense, that is, trustworthiness. The moral: beware of this impact equivocation.

In this discussion of reliability, I have exhibited another case of possible equivocation and impact equivocation, and have employed the concepts of necessary condition, sufficient condition, reported definition, and criteria attachment. I have also exhibited a concern with thinking about the broader context in which a claim (in this case about reliability) might be used. We often forget this broader contest, and thus neglect the prospective consequences of our intellectual operations. Teachers, researchers, and evaluators, as well as administrators (though administrators do not usually need this reminder), if they are to operate responsibly, must consider the interpretations that the public—or less sophisticated professionals—will put upon their terminology.

Perhaps you are wondering why both of my examples emphasize the fallacies of equivocation and impact equivocation. My reasons are three: first, these two fallacies permeate discussions of education and philosophy, and thus need more attention from philosophers of education; second, philosophers are by training better able than most to expose these fallacies; third, I want to suggest that combatting the fallacy of impact equivocation was and still is the principle function of ordinary-language philosophy of education. The abuse and suspicion directed at this approach to philosophy of education is of course partly attributable to errors made in its practice, but more importantly to the fact that this function was often not recognized by its practitioners and its audience. A primary reason for trying to determine what a word really *means* is to avoid employing it under the guise of its expressing a different concept, and thereby confusing ourselves and others.

IV. UNANSWERED QUESTIONS

As you realize, there are a number of significant problems not yet mentioned. I shall allude to a few more—hoping that you will be kind enough to accept my offering a program rather than a tightly-defended thesis. You have probably noted that I did not specify ultimately-acceptable value principles. However, I went as far as I feel justified at this time. Much work needs doing here.

Decision theory has been neglected. Perhaps it should have a greater role, but I am suspicious of attempts to quantify costs and benefits.

I have not offered a description of the *process* or rational thinking. Actually I doubt that there is a description of the process of rational thinking; rather rational thinking can proceed in many ways. But in any case my emphasis has been on the characteristics of rational thinkers and what they do.

Some will say that I mistakenly assume that thinking can be taught. This question depends very much on what one takes as evidence, but I do not now have hard evidence (of the kind sought by many such questioners) that thinking can be taught. Bruce Stewart, in a review of the literature, produced hard evidence to show that deductive logic can be taught (1978), but did anyone ever think that it could not be taught?

A related problem is whether thinking can be separated from the content about which one thinks. When asked that way, the answer is, "Obviously not," but if the question really is whether thinking can be taught separately from other subject matter areas, then I can offer no hard evidence. We at the Illinois Rational Thinking Project are working on an empirical study of this question. I do wish to note, however, that I did manage in mathematics classes to learn much of the mathematics that I needed in physics, chemistry, and bookkeeping.

Perhaps the toughest question of all is whether this approach to rational thinking, even if acceptable, is mearly another Kuhnian–type (1962) paradigm that too shall pass. If not, how can we show not–without in some circular manner appealing to a conception of rational thinking?

No doubt other problems have occurred to you. I hope that you will at least communicate them to me, but better still, become actively involved.

V. RESEARCH

There is research here for everybody. If you like to do philosophy you have probably noted your favorite topics embedded in this presentation. Actually, I cannot think of any philosophical problem that does not have bearing. Because of the central role played by explanation in this conception, I am particularly interested in this topic, but explanation is not alone in need of further attention. Everything needs sharpening or reshaping, I am sure.

We need to develop workable methods of testing for rational thinking. At present there is a dearth of usable instruments and methods of evaluation. This is partly because of weakness of the philosophical dimensions of testing theory and partly just plain neglect.[17] The work to be done is philosophical and empirical, and it is difficult to separate these two dimensions. Item-writing, for example, must be done–or closely monitored–by philosophers. Otherwise we get blinders-on empiricism and/or foolish mistakes. The same goes for classroom observation and other approaches to evaluation.

Preparation of feasible teaching materials and plausible curricula, and checking their effectiveness, are monumental tasks. Philosophers must play a role here to minimize mistakes and significant omissions. In playing this role philosophers must become immersed in the practices of educational research and curriculum development and will then be in a much better position to make the positive general contributions here that they could have been making all along.

VI. SUMMARY

In this progress report on the study of rational thinking, I have presented a conception in terms of the characteristics of rational thinkers together with a set of loose criteria for deciding whether these characteristics are present. I commenced with a set of proficiencies in certain contributory thinking operations: observing, inferring explanations, generalizing, conceiving and stating, and presenting one's thoughts. Proficiency in evaluating, the basic constituent of critical thinking, is then relevant not only in judging one's own results, but those of others as well. A last set of overlapping proficiencies consists of seeing some standard thinking problems and realizing appropriate counteraction.

A second major feature of the proposed conception of rational thinking consists of tendencies, including that of exercising one's own proficiency, taking into account the total situation, and accepting the necessity of exercising informed judgment. Exercising good judgment is the third major feature of this conception, the inclusion of which emphasizes the fact that being a rational thinker is not a mechanical operation. One must continually ask the monitoring question, "Does this all make sense?"

Because of the scope of this effort there are many unexplored topics, including the relation between thinking and action, the relation between rational thinking and morality, weakness of the will, the teachability of rational thinking, the separation for instructional purposes of rational thinking and other subjects of instruction, the psychological processes of a rational thinker, decision theory, and the possible circularity of attempts to defend a conception of rational thinking. You have probably noticed others.

A defense of the items in the conception has at most been alluded to. Most of it is from the work of others. Some things new to some of you might be the organization and selection of the items of this conception, the idea of loose deduction, the viewing of interpretation as inference to the best explanation, viewing account-for explanation as causal, the proposed partial analysis of specific causal explanation, the distinction between two types of assumptions, the separation of generalization from inference to the best explanation, the offered definition theory (including nonbehavioristic operational definition), and the emphasis on equivocation and impact-equivocation. I have here only provided at most a sketchy defense of the items in these areas.

In an attempt to show the interdependence of aspects of rational thinking, and to show for philosophers of education the special significance of equivocation and impact-equivocation, I treated two examples, one from educational policy and one from educational testing.

Lastly I have touched upon the need for research. There is much more than I have specifically mentioned. I hope only to have stimulated your imaginations.

One reason for presenting all of this to you at this time is to suggest a significant practical education problem area that calls for philosophic activity of all sorts. Philosophy can be the most practical activity around, and we can make an important contribution to education, and to philosophy all at the same time when focused on something like this.

What could be more rational than to pursue rational thinking as a professional activity? And would it not be irrational to neglect it?

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1. I am indebted to the following people for their suggestions: Paul Baker, Fred Ellett, Jr., Helen Ennis, James Greene, Felicity Haynes, Foster McMurray, Stephen Nor-

ris, Ralph Page, James Pollicita, Philip Steedman, Thomas N. Tomko, and Paul Thurston.

2. I first treated interpretation as inference to best explanation in *Logic in Teaching* (1969a, pp. 448-456), where I viewed an argument of A. C. Bradley's concerning how Shakespeare intended Iago to be played.

3. Stephen Norris' recent work and suggestions have been of much help to me in this and the later criteria for observation (Norris, 1979).

4. I have urged and argued this point elsewhere (1962, pp. 90, 106-107; 1969a, pp. 384-396; and 1974).

5. I presented this approach to loose deduction in *Ordinary Logic* (1969b, Ch. 5).

6. Of the charges against formal symbolic logic that I mentioned, only the third, the charge that it twists the meaning of some basic logic terms, has received extensive philosophical attention. P. F. Strawson (1952), a challenger, and H. P. Grice (1975), a defender, have been influential in the debate. J. L. Mackie (1973b) has offered a helpful and detailed summary of positions regarding the meaning of "if." Simply put, the third challenge is epitomized by the claim that, although the logic books allege that a false proposition implies any proposition, this just is not so. An example: Even though (in the situation I have in mind) it is false that our flight departs one hour behind schedule, it is also false that if it departs one hour behind schedule, it will encounter a thunderstorm. This if-then statement was false at the time because the weather was perfectly clear along the entire route for a whole day after the trip, although the antecedent ("it departs one hour behind schedule") was also false. Formal symbolic logic holds that if the antecedent is false, then the "if-then" statement is true.

One standard reply is that the anomaly, if it is one, is innocuous because we would never use the "if-then" statement to infer the consequent ("it will encounter a thunderstorm") from a truly-affirmed antecedent, since the antecedent is false. Another reply (in the spirit of Grice) starts something like this: it is because we would wonder what might be the point in such a situation of making the "if-then" statement (other than to license an inference from antecedent to consequent) that we think it to be false. Rather, the reply goes, the "if-then" statement is true and it means only that it is not the case both that the flight departs one hour behind schedule and that it does not encounter a thunderstorm. Since the first ("the flight departs one hour behind schedule") is false, any conjunction of this statement with any other *is* not the case. Hence, the denial of the conjunction is true. Since the "if-then" statement is equivalent to the denial of the conjunction, it too is true.

I shall not argue the matter further, although I basically agree with the Strawson challenge. The aforementioned items by Strawson, Grice, and Mackie are good starting points for someone who wants to pursue the issue.

7. I have examined assumption-finding in "Assumption-Finding" (1961) and *Logic in Teaching* (1969a, pp. 267-279, 396-402).

8. I have presented more thorough conceptualizations of logical competence elsewhere (1969b, 1976, 1979).

9. I have taken the liberty of changing the label here to "Inductive" as a result of a comment by Philip G. Smith in his response to this paper when originally presented. His comment about my labeling is still relevant, however, since my labeling is still at variance with his suggestion.

10. I am still working on the given criteria for specific causal explanation. Some of my previous work, however, is relevant (1973a, 1973b). Standard works in the field include Davidson (1967), Dray (1957), Gardiner (1952), Gasking (1955), Hart and Honore (1959), Hempel (1965), Hume (1946, 1961), Mackie (1973a), Martin (1970), Mill (1970), Scheffler (1956-7), and Scriven (1959, 1966, 1971, 1972).

11. I have developed this distinction between accounting for and justifying elsewhere: (1968, p. 525; 1969a, pp. 292-296). The distinction is in Scheffler (1956-7).

12. I hold that Criterion 2 takes precedence over Criterion 3, but the choice is sufficiently controversial for me to leave the decision open here. Some of the issues are examined in Brandt (1961) and Frankena (1963).

13. The act-form distinction I have explored in *Logic in Teaching* (1969a, pp. 123-252).

14. By "definition" I mean here the part doing the defining. A definition then does not include the defined term. I have found this usage least confusing to my students.

15. Range form was developed by Black (1954), following Wittgenstein (1953) I presume.

16. I developed this approach to operational definitions in "Operational Definitions" (1964).

17. Thomas Tomko and I have recently examined the state of the field of evaluating informal logic competence (1979). Bruce Stewart (1979) has prepared a detailed examination of 25 critical thinking tests.

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RESPONSE TO ENNIS

Nel Noddings
Stanford University

It is an unusual and stimulating experience to be invited to join other philosophers of education in working at the formative stage in a conceptualization of rational thinking. But just as it was impossible for Professor Ennis to present both his characterization and its defense in the time allotted to him, it will be impossible for me to present anything resembling a full critique. I shall suggest consideration of three points and outline the arguments which, I think, make their consideration imperative. The three points are: (1) the need for a central concept of rationality from which to generate the characterization of rational thinking, (2) the need for an explicit statement on curriculum theory and learning, and (3) the need for a separation of rationality from morality.

As I read three versions of Professor Ennis's characterization of the rational thinker, I found myself asking: Where did these items come from? Whence the categories of "proficiencies, tendencies, and good judgment" (p. 4)? What central notion of rational thinking or rationality produced them? Must I master every one of these behaviors to be a rational thinker? Am I allowed some lapses?

To say that "*rational thinking* is, or comes close to being, good thinking" (p. 3) begs some crucially important questions and fails to separate "rational thinking" from "creative thinking," "imaginative thinking," "intuitive thinking," and, even "generous thinking." The suggestion that reliance on a conception of rationality to justify the characterization of rational thinking may reveal a Kuhnian-type paradigm is (p. 32) I suspect, accurate as a prediction but unjustified as a fear. As Stephen Toulmin[1] has pointed out, there is little reason to suppose that rationality—or any component or attribute of mind—is invariant. Rather, mind like everything else, is evolving. It may be, as Toulmin further suggests, that invariance is not to be found in rationality itself but in the domains within which we judge rationality and in the sorts of questions we characteristically ask within these domains. It seems to me, then, that we need a set of core concepts and that these will lie beneath rationality itself and form a foundation for our characterization which will itself remain open into the future for revision.

Consider a specific example which may reinforce my plea for a central concept. Professor Ennis requires (in A,2,b,1) that a rational thinker should be proficient at "*inferring* (or just seeing)" that a given interpretation constitutes "the point being made—or at issue." It seems reasonable to expect that rational thinkers engaged in discussion of some familiar field will, usually, "see the point." But suppose I miss the point. (It happens now and then, even at PES meetings.) Am I to be dismissed from the class of rational thinkers? I would hope that understanding colleagues would say simply, "Well, she missed the point." It is worth considering these lapses, because they seem to occur fairly frequently, and they seem to happen to many of us who are otherwise adjudged to be "rational thinkers." (In fairness, I note that Professor Ennis does caution us not to apply the criteria mechanically. But, then, I really do need to know how I *should* apply them.) As we examine this point, it is worth asking how we refer to persons who almost *always* seem to get the point quickly and easily. Usually, we label such a person "very bright," or "highly intelligent," or "sharp." And a person who continually misses the point is "not very bright," or "dull-witted," or even "stupid." We do not, usually, refer to such a person's "rationality." So I feel the need for a central concept of "rational thinking" or "rationality," which will mark it off from related concepts, such as "intelligence," "logicality," "insight," and the like.

The need for a central concept is underscored when we consider Professor Ennis's invitation to examine the relation of rationality to morality. There seems, certainly, to be an ethical dimension to rationality, but I doubt that rationality *requires* morality. Rationality demands a commitment to inquiry as it is governed by the collective belief structure. Charles S. Peirce, for example, recognized that his entire "pragmaticism" rested on the ethical commitment of the unlimited community of inquirers to continued inquiry.[2] I think we cannot stress this point too strongly for, when rationality breaks down, the breakdown reveals itself in a heated defense of positions instead of the required open and sober consideration of the objections raised against them. We expect to be called up on our logic but not on our premises, on our calculations but not on our manner.

But the fact that the possibility of rationality rests on an ethical commitment does not preclude the possibility that an act or a decision or a judgment may be both rational and immoral. I can only sketch the lines along which an argument might be drawn.

First, insisting that a rational act is necessarily moral violates the common notion of "rational." We generally describe a broad range of scientific activity, for example, as "rational" and yet call its "morality" into question. Theodore Roszak has described many such scientific acts.[3] If we want to insist that these acts are not only immoral but also irrational or nonrational, we see again the need for a central concept of rationality. And it may be that, if we load our concept of rationality with the requirements of morality, our concept will collapse under the weight of meaning we have piled upon it. "Intuition" and "consciousness" are examples of terms which were rendered useless (at least temporarily) by the demands of thinkers packaging concepts.

Second, a careful examination of the domains in which judgments are made about rationality and morality might reveal differences in all of the following: (1) in the domains themselves, (2) in the kinds of questions we ask within the domains, and (3) in the sorts of justification we expect and accept in response to our questions. I would argue, I think, that morality is rooted in being, that it arises of necessity in the existential condition (which is *not* to say that it is derived from experience). Rationality may turn away from life as it is lived; morality is always directed to the facts of living and the choices we make in initiation of and in response to these facts.

A third point, related closely to the second, is that we may draw a distinction between *moral reasoning* and *morality*. A sophisticated level of moral reasoning does not necessarily enhance the morality of a given act. In general, rationality and morality do not stand in a relation of direct proportionality. To force them into such a relation weakens both.

In any case, the very existence of continuing conflict among philosophers over the relation between rationality and morality points up, again, the need for carefullly conceived and defended descriptions of each.

Finally, I want to discuss the need for an explicit statement on curriculum theory and learning. While it would seem that the Ennis characterization might serve as the foundation for a useful and interesting textbook for educational researchers—his use of illustrative cases is most effective—we might properly have reservations about its use as a guide to the development of general curricula in "rational thinking." In the sixties, many curricula were developed using the approach that may be in operation here. Subject matter experts made an attempt to characterize the "finest minds in the field" in terms of their knowledge and its structure, their thinking skills, and their attitudes and interests. It was assumed that the knowledge and skills thus described could be broken down into sequential bits so that a hierarchical program of study could be constructed. It was further assumed that the child and the expert (usually the "scientist") were much alike in attitudes and interests. Robert Gagné, in his description of *Science—A Process Approach*, states these assumptions explicitly.[4]

The two basic assumptions—one about the organization of knowledge and skills, the other about attitudes and interests—underlie much of the curriculum work of the sixties. Besides S-APA, we might mention PSSC (physics), SMSG (math), some "inquiry" programs in social studies and, indeed, most of the new math curricula. Our current assessment of cumulative experience is that, whatever their merits, these curricula do not come off well with average students. Further, both assumptions are at least questionable. The "child as scientist" is rather a poor metaphor, and the notion that sophisticated knowledge in a field is built up linearly has been questioned repeatedly.[5] Thus, if the Ennis characterization is to be used as a top-down start for general curriculum development in rational thinking, it needs further justification.

Professor Ennis's suggestion that "tests based upon (the criteria) can be used to discover developmental patterns.." (p. 4) worries me. With such tests, we usually find what we are looking for. Without a broad, central description of rationality, we risk testing for and evaluating students upon something called "rational thinking" and, after a while, the measure obtained in the test may *become* our conception of rational thinking.

Along with a clear statement on curriculum theory, a definite position on "learning" is required. When we speak informally, or with our focal attention on another subject, we are inclined to talk as though things are either innate or learned. Those skills we are not born with—in this case those of rational thinking—must be learned. But there is another respectable possibility. Some abilities *develop;* that is, they appear gradually as a product of maturation, learning, and cultural immersion. Such abilities and skills cannot be taught, at least not directly, and must be nurtured in ways we are far from understanding completely. I suspect that many of the proficiencies and tendencies (and all of the good judgement) outlined by Ennis are indeed developed. Further, some of them are rather tightly bound to a particular enterprize—educational research. This suggests that, rather than attempting to construct curricula for direct instruction on rational thinking, we might do better to recommend guidelines for the sorts of experiences which should be embedded in all curricula and for the modes of instruction which will model and, perhaps, induce the rational thinking we should like to see develop.

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1. Stephen Toulmin, *Human Understanding:* Vol. 1, *The Collective Use and Evolution of Concepts* (Princeton, N.J.: Princeton University Press, 1972).

2. See Manley Thompson, *The Pragmatic Philosophy of C.S. Peirce* (Chicago: The University of Chicago Press, 1953), Chapter VI.

3. Theodore Roszak, *The Making of a Counter Culture* (Garden City, N.Y.: Doubleday & Company, Inc., 1968).

4. Robert Gagne, "Psychological Issues in Science—A Process Approach," in *The Psychological Bases of Science—A Process Approach* (Washington, D.C.: American Association for the Advancement of Science, 1965).

5. See, for example, Jean Piaget, *Biology and Knowledge* (Chicago: The University of Chicago Press, 1971) or Michael Polanyi, *Personal Knowledge* (New York: Harper Row, Publishers, 1958.)

RESPONSE TO ENNIS

7

Philip G. Smith
Indiana University

It would be easy for me to spend more than my alloted time in sincerely praising this admirable work. For example, his discussion of the Segregation Editorial is far and away superior to anything else of its kind I have ever seen. In fact, it is the only time I have ever found anyone able to make something vital and useful out of the fallacy of equivocation. Since Toulmin (with two collaborators) has just published a new book on reasoning,[1] I checked on their treatment of the fallacy of equivocation and found only the traditional rather palled and obvious remarks.

If, however, I were to continue merely to express my admiration for Professor Ennis' work, I doubt if Bob would really be pleased and I'm reasonably sure that our audience would be disappointed. So, without directly attacking the substantive part of his work, let me call attention to certain things he has said that strike me as, shall we say, rather curious.

First and probably least important, is my curiosity about the short half paragraph with the long footnote in which Bob takes a wack at what he calls "The elaborate and elegant systems of symbolic deductive logic."[2] Why does he do this? By contrast, in the new Toulmin book the authors merely say in the Introduction. "Practical judgments cannot be considered totally in the abstract: while mathematics and formal logic may be helpful in the manipulation of certain elements in a train of reasoning, the outcome of the reasoning must ultimately be formulated and presented in terms of ordinary language and real-life issues."[3]

What is Bob's problem here? Certainly symbolic logic doesn't prevent one from expressing, for example, the exclusive rather than the inclusive meaning of "or"; one is prevented merely from being ambiguous in expression. Concerning "If-then" I don't know if it is the truth table analysis of the horseshoe that is bugging Bob, or the rule that an inconsistent schema implies every schema. Or, perhaps, some confusion of the two. I don't know of any logician ever claiming that a truth functional analysis of the horseshoe was equivalent to *all* of the ordinary language meanings of "if-then" or even of "implies"—and certainly not equivalent to ordinary language contrafactual conditionals, especially when expressed in the subjunctive mood. And I'm afraid that Professor Ennis hasn't got the rule just quite right. Strictly speaking, it's not that a false proposition, all by itself, implies every proposition, but rather than an inconsistent schema implies every schema. And hence, really implies nothing determinant. And this rule is not, I think, especially contrary to common sense. For example, if I were to say something like, "Since I am a bachelor that is married, the moon must be made of green cheese," I would think that a good common sense retort might be something like, "yeah, mister, you got that just about right!"

Now the point of all this is that there *are* severe limitations and constraints upon what can be done by formalization. But these limitations were discovered and well publicized by the middle of this century. And this work was done, not by the aficionados of ordinary language, but by the great mathematical logicians of that period: David Hilbert, Kurt Gödel, Alonzo Church, A. M. Turing, and Alfred Tarski.

There is a remarkable essay called "The Logic of the Mind,"[4] in which Bronowski reviews these discoveries of the limitations of formalization and discusses their import first, for science, then for literature, psychology, and philosophy. After this essay, I think no one need any longer feel even slightly defensive about not attempting formalization of anything so complexly human as a conception of rational thinking.

Another thing that strikes me as curious is the way in which Professor Ennis speaks of the relation between rational and moral. The way he put it was, "Rationality requires morality... I do not see how an act can be rational and immoral (really immoral-not just thought to be immoral).[5] Since it is a conception of *rational* thinking that he has under construction, one might suppose that he would have put it the other way around, that is, "I do not see how an act that is immoral can be really rational," so that "really" could then refer to the conception that he is developing.

In any event, let's see if we understand this relationship. I take it that rationality becomes a sufficient condition for morality but that morality is merely a necessary condition for rationality. This would leave the possibility that a more or less irrational act could still be moral while an immoral act could never be *really* rational.

Incidently, if this is correct, without suggesting that the horseshoe is *always* an appropriate translation of the term "requires," here is a case where the horseshoe (i.e. $r \supset m$) would seem to provide a precise formalization of the meaning. When r is false (i.e. when an act is irrational) m could be true or could be false without in any way making the overall relationship false. The only situation that would make the *schema* false would be for an act to be both rational and immoral and that's exactly what Bob thinks could never happen.

In the abstract all this sounds plausible and I suspect that Immanual Kant might agree, since he evidently believed that moral virtue was somehow accessible to any person regardless of his other talents. But I doubt if it would satisfy Plato.

Moreover, there is another kind of difficulty here. As Max Black has pointed out, while "rational" is frequently just a pretentious synonym for "reasonable", "Irrational" is not a synonym for "unreasonable."[6] As a person became more and more careless in relation to Bob's criteria, at some point we might conclude that he was being unreasonable. But it would not follow that such a person was irrational. And the dichotomy on the other side of the schema (i.e. moral-immoral) is also too restrictive. Surely we need to differentiate between what is morally required and what is merely morally permissable.

But the main difficulty I have with all this is that in the conception as so far developed, I can't find much that even seems to point toward benevolence, respect for persons, committment to justice or to universalizability or even to the golden rule. It seems that *something* of this kind is needed in order for the conception even to approximate being a sufficient condition for being moral.

Perhaps the rational thinker's *tendencies* listed under B., would be a good place to start construction of what is needed. But until Bob gets over his curious reluctance concerning the *A.* 6, *e.* section (on value statements), I'm afraid that making rational thinking a sufficient condition for morality will remain an illusive goal.

Why is he so reluctant? Perhaps footnote eleven provides a clue. The point at issue is whether or not consistency with higher-level value propositions takes precedence over a consideration of consequences. I sense that Bob's intuition tells him that morality must be basically deontic, yet to follow *any* kind of rule without regard for consequences violates his highly developed sense of what it is to be reasonable. I hope he will follow *both* his intuition and his good sense. Afterall, he is building his conception in terms of guides, rules of thumb, matters to be considered, and the like, as aids to "good judgment" rather than "mechanically determined results." This seems to me to be the very thing we need in relation to value judgments, including moral value judgments.

I'll close with one final bit of curiosity that can be put in the form of a direct question. Since he has, (and I think quite correctly) differentiated inferring explanatory hypotheses from inductive generalization, I wonder why he hasn't used the traditional distinctions of deduction–retroduction–induction. My guess is that he has good reasons. And since I have already learned a lot from his work I'll close with this question in order to learn still more.

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1. Toulmin, Rieke, Janik, *An Introduction to Reasoning* (N.Y. Macmillan, 1979).
2. Ennis, Robert H., "A Conception of Rational Thinking," p. 11.
3. Op. cit., p. 16.
4. Bronowski, J. "The Logic of the Mind," *American Scientist*, (journal of Sigma Xi) March, 1966.

5. Ibid., p. 2.

6. Black, Max, "reasonableness," in *Education and the Development of Reason*, eds. Dearden, Hirst, and Peters (London, Routledge and Kegan Paul,) 1972, p. 199.

II

GENERAL SESSIONS

EDUCATION, JUSTICE AND SELF-RESPECT: A SCHOOL FOR RODNEY DANGERFIELD

Kenneth A. Strike
Cornell University

Israeli Prime Minister Menachem Begin commented following the Camp David Summit that a central teaching of the Jewish people is that a human being can have no greater triumph over an enemy than to make that enemy a friend. In its Christian version this idea appears as the injunction to love one's enemies and to love one's neighbor as one's self.

What goes unnoticed in these ideas is that they imply not only an obligation to love one's neighbor, but also a duty to self love. The duty of respect of one's enemy or one's neighbor is a duty that individual owes to him or herself as well. Indeed, it is arguable that self-respect is a psychological precondition of showing respect for others. People whose egos are starved for respect make of others the means to their own ego enhancement. Perhaps we cannot love others until we first love ourselves.

I shall not argue the legitmacy of my interchanging respect above for love although I do think it appropriate and correct. I do wish, however, to suggest that self-respect is a topic worthy of serious consideration by educators and to make some observations concerning how it should be conceived.

Self-respect is an issue of distributive justice. That is perhaps counterintuitive. Self-respect is not like political rights or money. Nevertheless, it is something that societies can distribute in that social policy can affect its realization in individuals or groups. Moreover self-respect has important connections with other central concerns of theories of distributive justice.

What, then, is the value of self-respect? First, self-respect is valuable if for no other reason than that people wish to have it and seem to need it. Having self-respect enhances one's sense of well being. Not having it causes psychic pain. We appropriately think of the value of self-respect in such eudaemonistic or hedonistic ways.

Such accounts, however, cannot be the entire story, for if self-respect is a kind of pleasure or personal good, it is a peculiar kind. Most pleasures are pleasures contingently. One may like them or not without committing any absurdity.

Even when a liking is fairly universal, as we may suppose the liking of ice cream to be, there is nothing logically out of order in not sharing in that liking. Someone who does not like ice cream may be different, but he or she is not irrational. But not desiring self-respect is irrational. To attach no value to self-respect seems inherently self-destructive. Thus, self-respect is not simply or contingently a pleasure or a good. It is something a rational person must want. Hedonist accounts of the value of self-respect cannot, therefore, be adequate. We must search for something more fundamental.

Rawls makes some suggestions which can be expanded into an adequate account. For Rawls, self-respect is a primary good.[1] A primary good is a universal instrumentality. It is something a rational person wants whatever his or her conception of the good, because it turns out to be a prerequisite to achieving other goods.

Rawls suggests that self-respect has two aspects.[2] First is the sense of one's own worth. Second is a sense of personal competence, a confidence in one's ability to fulfill one's intentions. Self-respect is a primary good, Rawls claims, because

> When we feel that our plans are of little value, we cannot pursue them with pleasure or take delight in their execution. Nor plagued by failure and self-doubt can we continue in our endeavors....Without it nothing may seem worth doing, or if some things have value for us, we lack the will to strive for them.[3]

Rawls's view can be summarized by the claim that lack of self-respect is psychologically debilitating. Its possession, then, is necessary if we are to pursue and enjoy our individual goods. Rawls, however, misrepresents both the scope and nature of the claim for self-respect. Thus I will develop an "enriched" view of self-respect via a set of objections to Rawls's view.

Initially, Rawls understates the scope of his point. It is not just that a lack of self-respect is debilitiating with respect to our ability to pursue and enjoy our goods, it is also the case that a lack of self-respect is debilitating with respect to our willingness to defend rights. A person who lacks self-respect may feel less entitled to goods or to fair treatment than others. Such a person may experience oppression or unfair treatment as fitting. "People such as I deserve no better," will be the reasoning. Thus, people who lack self-respect may acquiesce in their own oppression. The point is forcefully illustrated in the institution of slavery where the assault on the dignity of the slave functions to justify slavery to the master and to the slave as well.

This point is connected to another. Rawls overly psychologizes his argument. Lack of self-respect is psychologically debilitating. More to the point, however, is that there is a logical connection between self-respect and the entitlements to rights. Lack of self-respect is debilitating because one's lack of worth provides rational grounds for being denied rights or benefits available to others.

We thus need to explore the logical connection between self-respect and the justification of rights. Since the claim I shall make here is involved, I shall sketch it first and then develop its features. I wish to hold the following:

1. There is a fundamental sort of equality such that all men are created equal.
2. This fundamental equality expresses the facts
   a. That individuals fall into the class of entities to whom rights apply in virtue of the possession of some property (or class of properties) which define them as being persons or human beings. (Properties such as having a moral sense, having a capacity for a sense of justice, rationality, or being created in the image of God are traditional and plausible candidates.)
   b. That variations in this property are not relevant grounds for preferential treatment vis-a-vis the application of principles of justice.
3. This fundamental equality is the rational basis of self-respect.
4. One who lacks self-respect, thus, by implication doubts his or her full humanity and thereby weakens the grounds for the extension to himself or herself of equal rights.

To develop these points we can again turn to Rawls. In a section of *A Theory of Justice* entitled "The Basis of Equality" Rawls distinguishes three sorts of equality.[4] The first is roughly the notion of due process which he describes as regularity or impartiality in the application of rules. The second concerns the structure of institutions. Its content is specified by Rawls's two principles of justice.

Rawls then proceeds to a third sense of equality which he regards as more fundamental than the other two. This notion of equality is developed as a response to the question concerning how we are to identify the class of beings to whom the two principles apply. Rawls's response involves two claims. First, he claims that a particular property, the capacity for a sense of justice, is the relevant ground for inclusion in the class of beings (persons) to whom justice is due. Second, he claims that variations in the capacity for a sense of justice are not relevant grounds for privileged status with respect to the principles of justice. Variations on the criterion property do not entail degrees of personhood just as variations in SAT scores among those admitted to a university do not make students more or less Freshmen.

But in what sense are all persons equal insofar as the principles of justice are concerned? Since Rawls's principles do justify inequalities, the demand cannot be that the application of the principles results in an equal distribution of goods. Rather, the demand is that people should be treated equally in applying the principles. There can be no privileged position staked out which is assumed prior to the application of the principles. Principles of justice must be applied impartially. Since everyone is equally a member of the class to whom the principles apply there is no rational ground for antecedent privilege.

This idea is perhaps what Bentham had in mind in the claim that in calculating the average utility everyone's happiness counts as one. The basic equality of persons precludes any claim that some individual should have his or her satisfaction multiplied by a larger factor. The point is illustrated by criminal justice. The basic equality of persons does not preclude some people from being found guilty and others innocent. That judgment is made on the basis of the relevant facts and legal principles. But it does preclude anyone from demanding privileged status prior to the application of the principles. Thus claims that one should bear a lesser burden of proof or receive more lenient treatment than others for the same offense are excluded. The justification of such claims would require variations in being a person.

The bridge from these claims to the issues concerning self-respect is the recognition that being equally a person is not only the basis of entitlement to impartiality in the application of rights, but is the basis of equal respect. To put the matter in Kantian terms, being a person makes one an object of value, an end in itself. Membership in the class of person admits one to the kingdom of ends. And to be an object of value, an end in itself, is to be deserving of respect. Self-respect, of course, is simply the recognition and the affective realization that the respect due to all persons is due to one's self by one's self.

This view of self-respect accounts for the centrality of self-respect in considerations of justice. It shows why lack of self-respect weakens one's ability to defend one's rights and pursue one's interests. The person who lacks self-respect by implication doubts his or her equal humanity. In doing so the entitlement to justice is called into question. The individual feels entitled to shoddy treatment. Thus, the psychological debilitation which results from a lack of self-respect has a rational base. It is a valid deduction from a false premise in that it is the appropriate posture to assume given the assumption of one's lack of worth.

This claim has an important corollary. Not only does the denial of respect weaken the claim to fair treatment vis-a-vis rights, it is also the case that the denial of rights can be construed as an expression of lack of respect and of the rejection of the fundamental equality of persons. What is the implication in a willful refusal to extend to someone legitimate rights? If the fundamental equality of persons is a basic commitment in the just treatment of individuals, then someone who is treated unjustly is entitled to conclude that his or her basic humanity has been impugned for he or she is not being shown the respect due to persons. Refusal to extend rights when due, thus, is an attack on the worth of the individual. When such an attack is internalized, it leads to a loss of self-respect.

Here a few cautionary remarks are in order. I have been arguing a thesis about how people will feel and behave on the basis of the relations between certain concepts. People who lack self-respect will lack the will to defend their rights because they implicitly deny a commitment important to their entitlement to equal rights. Likewise people who are denied equal rights will come to lack self-respect because the denial of rights implies a judgment about the value of the person whose rights are denied. These claims are not simply philosophical claims. They are explanatory hypotheses. They assume that the relations between concepts has something to do with how people feel and act.

There are at least two problems with this sort of account. The first is that numerous counter examples occur. There clearly are cases where people are denied their rights without loosing their self-respect or where they lack self-respect without a resulting loss of rights. Such counter examples would need to be handled by a variety of qualifications and *certeris paribus* clauses. That is, the logic of the concepts is more likely to be internalized under some condition than others. The self-respect of a minority oppressed by a majority may be more threatened than the self-respect of the members of an entire population oppressed by a tyrant. In the latter case everyone is in the same boat. Thus, it is implausible to assume that one's oppression stems from a personal deficiency and easy to assume that it results from the malevolence of the oppressor. Also, minority groups may be less likely to suffer loss of self-respect if they have a functioning cultural tradition in which a sense of self-identity can be rooted than if that source of self-respect is missing. Any view which tries to generate a social psychology of self-respect based on the relation between a set of concepts will need to be augmented with such auxiliary hypotheses if it is to adequate the facts.

The second difficulty is more perplexing. The notion that the logic of a set of ideas governs behavior and attitudes views people as inordinately rational. It seems to ascribe to individuals a grasp of complex ideas which grasp accounts for why they feel and act as they do. But surely this is impossible. What is needed, then, is a mechanism by means of which the structure of a set of ideas gets reflected in the feelings and behavior of individuals without the ideas having to be understood by each of these individuals. Here two possibilities occur. First, there may be key individuals who having grasped the structure of the set of ideas, function as models or sources of information to others concerning how to feel and act. One suspects that the slave who failed to adequately grasp the notion that enslavement is a function of inferiority found many who were willing to explain the point and to model the attitudes and behaviors which were deemed appropriate. Second, there are cases where people seem guided by ideas, but where they cannot attend to them or formulate them. Rules of grammar are the standard case. That people know them is demonstrated in that they can use and understand language. But few can articulate the grammar they employ. Perphaps the logical relations linking equality, rights and self-respect function as a kind of grammar governing what counts as appropriate feelings and behavior in appropriate conditions. It does appear to be the case that people whose rights are denied intuitively feel demeaned and intuitively see the denial of their rights as an attack on their basic worth, and they do this without the aid of a conscious grasp of the logic of the ideas which govern the situation. This example is suggestive of the applicability of the grammar analogy.

My view of respect and self-respect treats being a person as the rational basis of respect and self-respect. Being a person does not vary with any empirical property. Thus, everyone is entitled to equal respect and to self-respect regardless of any characteristics which he or she may possess or lack. One's competence, social status, or personal appearance are logically and should be psychologically unrelated to one's respectability and self-respect.

The view of self-respect implies the need of another concept. For clearly people do have opinions concerning such matters as their competence, status or appearance, and clearly these opinions have some impact on how people feel about themselves. We thus need another concept to designate self-evaluations which pertains to descriptive features of individuals. Let me label the object of this kind of self-evaluation self-esteem. Self-esteem differs from self-respect in the following ways:

First, self-esteem is a function of the properties possessed by individuals and the extant social norms for valuing actions and characteristics. Obviously, the criteria of self-evaluation will differ from person to person. Most of us will tend to emphasize those criteria on which we succeed. But to some extent self-esteem will be "norm-referenced." It will be based on comparative judgments.

Second, self-esteem, unlike self-respect is probably not a primary good. It does not have the logical connection to rights that self-respect does. Perhaps a person who lacks self-esteem will be psychologically debilitated, but this may be the result of confusing self-respect with self-esteem. Self-esteem is rather simply a good but not a universal instrumentality. It is certainly possible that people can recognize that they are less able, less attractive, less whatever, than others without losing a sense of their own worth. Indeed, the fact that this is both possible and desirably is an important reason for distinguishing self-esteem and self-respect.

Third, the rational basis for self-esteem will be relative to the norms a society has for evaluating people. Spelling out the rational basis of self-esteem thus requires identifying and evaluating those norms. The basis for self-esteem will be culturally relative. It will be legitimately so to the degree that one culture's norm can legitimately differ from another.

It is in order to make some observations concerning some of the major systematic sources of self-esteem in our society. The following are noteworthy.

First, esteem is often a function of what turns out to be one's market value. Occupational status hierarchies are the most obvious manifestations of this factor. The status which is attached to educational attainment or achievement is part of what makes it valued. Self-esteem, then, has an obvious connection to economic values and practices.

A second source of esteem is personal competence. People may have a higher regard for themselves when they can successfully perform in some way. Personal competence may, of course, be linked to market value. We may value one competence more than another becuase it has some economic attachment. More important, however, is the fact that this is not necessarily the case.

The third source of self-esteem is virtue. People value themselves positively when they believe themselves to be good, honorable and otherwise moral or virtuous individuals.[5] One concern here is that people need to feel that they are leading useful and productive lives. This is, I believe, part of the message of the work ethic.

These observations introduce a heavy agenda of issues concerning what would count as a rational basis of self-esteem. One would need to determine the adequacy of the work ethic or of the varieties of meritocracy. They also suggest that the sources of self-esteem are deeply rooted in public ideologies and in social and economic structures, and that in turn suggests that we should not have excessive optimism concerning what schools can do to promote self-esteem or self-respect. Nevertheless, schools should not be presumed to be altogether impotent. Consider, then, some ways that schools might be involved in dealing with the student's self-respect and self-esteem.

First, the distinction between self-respect and self-esteem might be something schools attempt to teach. The distinction is an important one for individuals to master, for the failure to master it may result in a loss of self-respect where only self-esteem should be at stake. Schools can be hard on children who are not academically successful. It is a tragedy when children come to doubt their basic worth when they fail at reading or math. The ability to distinguish one's worth from how good one is at cognitive skills is an important survival skill. To allow self-respect to be at stake when only self-esteem is at issue attaches a far too heavy penalty to failure. If we are indeed going back to the basics, this may become more important than ever. Achievement is important, but we must not attach too much psychic freight to it.

The distinction between self-respect and self-esteem is surely a suitable topic for moral education and, given the connection between self-respect and rights, might be incorporated into the civics curriculum. It is more important, however, for the distinction to be exhibited in the behavior of teachers toward children. The teacher whose affection for and fairness toward his or her students is not contingent on their achievement expresses the distinction. Similarly, the distinction can be captured in verbal form by making sure that criticism is linked to products or actions, but not to the person. "Good work" communicates a different message than telling a child that he or she is a good person for doing good work.

Teachers thus should master the distinction. It is important for teachers to know that criticizing students' work need not be construed as a denial of that student's fundamental worth. Rogerians who are big on unconditional positive regard are classical examples of this problem. Because they seem to view any criticism as an attack on the worth of the individual, they are often led to withhold criticism. But criticism is central to the mastery of most skills.

Concerning self-respect the crucial point is that respect is expressed by regard for rights. This is, I think, the central issue in desegregation. *Brown v. Board of Education*[6] is plausibly read as rejecting segregation because segregation denies the fundamental equality of Blacks. Segregation is based on the assumption that Blacks are inferior, not incidentally on the notion that Blacks are less academically able than whites, but on the far more noxious claim that they are less fully human than whites. This is plausibly regarded as the point of Justice Warren's interest in the psychological harm done by segregation. The argument is essentially that segregation expresses contempt for the humanity of Blacks, and when Blacks internalize this judgment, segregation undermines their self-respect.[7]

At least some of the recent research into the consequences of desegregation on the self-concept of Blacks should be understood as concerned with self-esteem, not self-respect.[8] What is at issue in such studies is whether or not Blacks suffer some loss of self-esteem when they must compete with whites who are academically better prepared than they. There is some evidence that this is the case. But this evidence is not evidence against the Supreme Court's argument, nor is it very relevant to the merits of desegregation. The point of desegregation is to remove any hint from public policy that Blacks are less fully persons than other people. It is no doubt desirable that Black self-esteem be thereby enhanced. But failure here is not compelling evidence against desegregation since factors pertinent to self-esteem are not commensurable with those pertinent to self-respect.

Desegregation is merely an illustration of the basic point that the central thing schools can do to enhance their students' self-respect is to respect their students' rights. To apply this notion effectively schools will need a rational doctrine of student rights and this is not an easy thing to come by. A few years back I wrote a paper in which I argued that the comparative immaturity of students was grounds for distinguishing the rights of students from the rights of adults.[9] I am still inclined to this opinion, but I am somewhat penitent about the excessively utilitarian formulation of my argument. Perhaps it is the case that students are rarely capable of profiting from or contributing to the marketplace of ideas. But it is also possible that the gratuitous suppression of a student's views can convey a lack of basic respect for the student. Students should be listened to because they are people, not because they may be right. Educators need, then, to give serious thought to the ways in which respect and disrespect are conveyed by the attitude of school personnel to the rights of students.

I shall conclude with some observations on schooling and self-esteem. Here, perhaps, we should focus on the plight of the low achiever. Schools in a meritocratic and achievement oriented society can be difficult places for students who do not succeed in academic ways. It is no answer to this dilemma to improve instruction for low achievers since self-esteem is probably "norm referenced" rather than "criterion referenced." What the schools can do, however, is to provide diverse ways to succeed. I believe that physical education, music and art and extra curricular activities have an important role to play here.

These observations may be particularly important for students in vocational programs. Some schools counsel students into vocational programs on grounds of a history of academic failure. It is reasonable to suppose, therefore, that the road to a vocational track charges a toll of self-esteem. However, a vocational curriculum may also do good things for the self-esteem of those who study it by providing alternative ways to succeed and ultimately by providing honorable ways to earn a living and make a social contribution. These gains are not everything. They will not make dull or tedious work engaging or growth promoting; nor will they alter the fact that society attaches more prestige to head work than hand work. But they are not nothing either. They can be paths of self-esteem for people to whom few other options are available short of the development of substantially anti-social values to succeed on.

Let me summarize. This paper is based on a distinction between self-respect and self-esteem. I have argued that self-respect is fundamental since it expresses our value as persons and is linked to basic rights, but I have held also that self-esteem is an important good. I have made three points concerning what schools can do to promote both. They can teach the distinction, they can express respect for students by extending to them their rights, and they can provide diverse ways to succeed.

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1. John Rawls, *A Theory of Justice* (Cambridge, Mass: Harvard University Press, 1971), p. 440.

2. Ibid.

3. Ibid.

4. Ibid., pp. 504-512.

5. Here it should be noted that there are some grounds for attaching virtue to self-respect as well. If the basis for self-respect is that one is a person, and if being a person is a matter of having a moral sense, it becomes possible to argue that a thoroughly reprobate individual is deficient with respect to the moral sense and thus to conclude that he or she is disqualified from being treated as a person. Capital punishment might be defended in this way. I think the bulk of my case is against this point but it is worth fuller exploration.

6. *Brown v. Board of Education* 347 US 483 (1954)

7. See for example William E. Doyle, "Social Science Evidence in Court Cases," in Ray Rist and Ronald Anson (editors); *Education Social Science and the Judicial Process*, (New York: Teachers College Press, 1977)

8. See Edgar G. Epps, "The Impact of School Desegregation on Aspirations, Self-Concepts and Other Aspects of Personality," in *Law and Contemporary Problems*, Vol. 39, No. 2, (spring, 1979) pp. 300-313.

9. Kenneth A. Strike, "Philosophical Reflections on *Tinker v. Des Moines*" in *Philosophy of Education*, 1974, pp. 397-410.

RESPONSE TO STRIKE

Charlotte Oliver
University of British Columbia

Professor Strike's paper centres upon the important and often overlooked distinction between self-respect and self-esteem. Self-respect is the feeling of being worthwhile, the rational basis of which is the recognition that one is a person. Persons, by virtue of being persons, have a fundamental equality such that they fall into the class of entities to whom rights apply, and such that they are to be treated impartially with respect to the principles of justice. On the question of what it is that qualifies one as a person, Strike is non-committal, but he believes that "plausible candidates" include having a moral sense, having a capacity for a sense of justice, rationality, and being created in the image of God. He also accepts the Kantian notion of persons as ends rather than merely as means. Self-respect is claimed to be a universal instrumentality because it is a prerequisite to achieving other goods, whatever their nature. Strike purports to base his concept of self-respect upon Rawls but, in actuality, it departs in very significant ways from Rawls.

Self-esteem, as opposed to self-respect, is the feeling of being worthwhile which comes about as a result of seeing oneself as at least on a par with others in terms of occupational status, educational achievement, appearance, personal competence, degree of virtue, and the like or, to use Strike's term, "market value." The rational basis of self-esteem is culturally relative and will accord with the norms a society has for evaluating people. Strike claims that self-esteem is a good, but not a universal instrumentality.

For Strike, the distinction between self-respect and self-esteem has important implications for justice, or morality, and for education.

Re justice: There is a logical connection between self-respect and entitlement to rights. Whether or not Strike really means this is unclear. I shall return to this point. In any case, he does point out that lack of self-respect is debilitating psychologically in that it weakens one's will to defend her rights.

Re education: Understanding the distinction between self-respect and self-esteem will enable persons to feel worthwhile even when they fair poorly in relation to others. In school, Rodney Dangerfield's teachers will teach the distinction, and they will show Rodney respect by extending to him his rights, thereby increasing his self-respect. They will help him to achieve self-esteem by providing diverse ways for him to succeed.

I agree with several of Strike's conclusions, particularly that of the distinction between self-respect and self-esteem. However, I believe that his account of self-respect is inadequate and will need to be fleshed out before any real educational effort can be made to increase people's self-respect. I also see some difficulties with what Strike takes to be the implications of his distinction for justice and for education. I shall discuss these difficulties. I should then like to suggest what I take to be an important consequence that would follow for morality if this distinction is taken seriously. Finally, I shall point out a possible sense of self-respect which is distinct from both self-esteem and Strike's self-respect.

Let us begin by examining Strike's conception of self-respect. Self-respect is portrayed as having the sense of one's own worth, the rational basis of which is the recognition that one is a person. Although this may be a necessary condition of self-respect, it is not at all clear that it is a sufficient condition. Does self-respect not also entail treating oneself with respect? If a person feels worthwhile because he recognizes that he is a person, yet does nothing when others demean him or infringe upon his rights, we are unlikely to grant that he has self-respect. Whatever his feelings, he is not treating himself with respect.

By Strike's own account, self-respect only obtains when one recognizes that he is a person. Thus, to have self-respect one must know what a person is, i.e., what qualifies one as a person. Moreover, since one's feeling of worth must be grounded in or based on the recognition of one's personhood, a self-respecting person must see why being a person makes one worthy of respect. Given the important role which Strike assigns to recognizing that one is a person, he owes us a rather full account of what a person is and why being a person makes one worthy of respect. His failure to provide such an account makes his conception of self-respect inadequate for educational purposes. If we are seriously concerned with educating, then it would seem necessary to convey to students just what a person is and why persons are deserving of respect.

Strike claims that his distinction is important because there is a logical connection between self-respect and entitlement to rights (though not between self-esteem and entitlement to rights). What he sometimes appears to be arguing is that lack of self-respect somehow diminishes one as a person and thereby weakens one's entitlement to rights. However, since this position is obviously indefensible, I suspect that Strike does not wish to argue this. Perhaps he means to say that a person who lacks self-respect feels less than fully human. Since there is a logical connection between personhood and entitlement to rights, such a person will also feel that he is not entitled to the rights of persons. This does not establish a logical connection between self-respect and entitlement to rights. Perhaps all Strike means to assert is that being a person is the rational basis of both self-respect and entitlement to rights. If so, then his talk about logical connection is somewhat misleading.

The distinction between self-respect and self-esteem is claimed to be educationally significant because teachers who know the distinction will be better able to promote both self-respect and self-esteem. Students like Rodney Dangerfield, though they are losers when it comes to market value, will now have self-respect because their teachers will extend to them their rights. It seems to me that to think that extending to a person his rights will increase his self-respect is too simplistic. As I argued earlier, self-respect is not just a matter of seeing oneself as having equal rights with others; it is also, in some measure, to understand what a person is, that is, an entity with a moral sense (a sense of justice or whatever), with feelings, plans, intentions and so forth. To have respect for persons is to allow them equal rights, yes, but it is also to recognize in them the qualities which qualify them as persons.

If a person really has the concept of what it is to be a person, and what makes persons worthy of rights, surely poor treatment from others can do little to diminish that person's self-respect. It seems to me that the most important educational task, then, is to make students aware of what it is that makes persons persons. What we must aim for is not the ability to articulate the concept of persons but, rather, the inclination to use the concept in determining how to treat oneself and others. Granted this is a very difficult task. Still, there are some things teachers can do which seem likely to further this end. If self-respect has something to do with treating oneself with respect as well as regarding oneself in a certain way, then another way to promote self-respect is to point out ways in which persons show lack of respect for themselves, and explain why this is wrong.

A second point I wish to raise regarding the implications of the distinction for education is that Strike grossly underestimates the importance of self-esteem. Although he thinks it important, he clearly does not accord it the same degree of importance as self-respect. For example, he says: "Perhaps a person who lacks self-esteem will be psychologically debilitated, but this may be the result of confusing self-respect with self-esteem." Elsewhere he adds: "The failure to master [the distinction between self-respect and self-esteem] may result in a loss of self-respect where *only* (italics mine) self-esteem should be at stake."

Unlike Strike, I believe that lack of self-esteem can be just as debilitating as lack of self-respect. In fact there are grounds for thinking that self-esteem is a universal instrumentality and that Rawls was arguing this, at least in part, in the excerpt Strike quotes:

> When we feel that our plans are of little value, we cannot pursue them with pleasure or take delight in their execution. Nor plagued by failure

> and self-doubt can we continue in our endeavors...Without it nothing may seem worth doing, or if some things have value for us, we lack the will to strive for them.

Strike fails to mention that Rawls uses the terms "self-respect" and "self-esteem" interchangeably. I believe that Rawls would want to support the idea of self-esteem as a universal instrumentality, as "failure" and "self-doubt" would seem to be more closely related to self-esteem than to self-respect.

I should now like to consider a further possible benefit of Strike's analysis of self-respect. His notion is, I believe, a sensible way of delineating the sphere of private morality. The idea is found in Downie and Telfer: "If respect for others is the supreme principle of public morality then respect for self is the supreme principle of private morality."[1] Downie and Telfer look for a sense of self-respect which would parallel respect for persons. They fail to find a sense such that it is always appropriate to have it and such that the "respect" is for being a person rather than for being an individual who is outstanding in some way. Self-respect as Strike outlines it, is just the concept they are seeking. According to this line of thought, anything which calls into question one's self-respect would be a proper subject of private morality. Claims of demeaning oneself would certainly qualify as matters of private morality whereas such things as failure to develop talents would not. I do not have time to expand upon this, but would like to suggest that it seems to be a fruitful direction of study to pursue.

Though Strike has clearly distinguished one sense of self-respect from self-esteem, I believe that there is another sense of "self-respect" which is distinct both from "self-respect" as Strike uses the term, and self-esteem. Self-respect as Strike explicates that notion picks out something which it is desirable for persons to have at all times. It is never appropriate that persons stop regarding themselves as persons. In contrast, the sense of self-respect to which I wish to call attention picks out a feature of persons which we deem it appropriate that they lose when they behave immorally. When a person does something which goes against his own moral code, we expect him to suffer shame, that is, a temporary loss of self-respect. What he loses in such a case is not the sort of self-respect which Strike has identified, for he continues to see himself as a person. Nor does he lose self-esteem in the sense of coming to believe that his "market value" has decreased. What is temporarily lost is something like a feeling of moral worth.

Strike seems to recognize that something has been left out of his account. He subsumes "virtue" under self-esteem and gives us a footnote to the effect that it may also be connected with self-respect. Although the self-respect that is associated with being virtuous is closely tied to both self-esteem and to the sort of self-respect identified by Strike, it is, I believe, clearly distinguishable from both. Strike's kind of self-respect is appropriate for moral beings but not for non-moral beings. In contrast, the kind of self-respect to which I am calling attention is appropriate for moral persons but not for immoral persons. The rational basis for this sort of self-respect would be living up to one's own moral code. Self-respect in this sense has considerable significance for moral education. Because it is psychologically painful to lose self-respect, maintaining it provides a strong motivation to act morally.

I am sure Strike's paper will provoke thought and discussion in many areas: in this response I have considered only a few.

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1. R.S. Downie and E. Telfer, *Respect for Persons* (London: George Allen & Unwin, 1969), p.83.

CAN PSYCHOLOGY BE RELEVANT TO EPISTEMOLOGY?

Harvey Siegel
University of Nebraska-Lincoln

I.

Several problems currently being discussed, both in philosophy in general and in philosophy of education in particular, have more in common than is usually supposed. These problems—which include the analysis of conceptual change, the objectivity of theory choice, and the epistemological importance of developmental psychology, to name a few—all crucially depend on a prior consideration: namely, on the relationship between psychology and epistemology. There are, no doubt, various interconnections between psychology and epistemology. For example, psychology, especially developmental psychology, may tell us much about the development of knowledge. Epistemological considerations, conversely, may help clarify categories, terminology, and issues necessary for progress in psychological theory and practice. However, there is, I believe, one crucial interconnection which cannot be sanctioned; one respect in which psychology cannot be relevant to epistemology. Namely, I will argue in this paper, psychology cannot be relevant to epistemology insofar as epistemology is taken to be primarily concerned with the evaluation of knowledge-claims.

I begin by noting the relationship between the psychology/epistemology distinction, on the one hand; and Hans Reichenbach's celebrated distinction between the context of discovery and the context of justification, on the other. (Throughout, the phrase "psychology/epistemology distinction" is to be taken as a concise substitute for "psychology cannot be relevant to the epistemological task of the evaluation of knowledge-claims.")

II.

Reichenbach, in Chapter One of *Experience and Prediction,* sets out what he considers to be the three main tasks of epistemology: the descriptive, critical and advisory tasks. In the process of delineating these various tasks, he argues that it is necessary to separate sharply epistemology from psychology, for:

> There is a great difference between the system of logical interconnections of thought and the actual way in which thinking processes are performed. The psychological operations of thinking are rather vague and fluctuating processes; they almost never keep to the ways prescribed by logic and may even skip whole groups of operations which would be needed for a complete exposition of the subject in question...It would be, therefore, a vain attempt to construct a theory of knowledge which is at the same time logically complete and in strict correspondence with the psychological processes of thought.
>
> The only way to escape this difficulty is to distinguish carefully the task of epistemology from that of psychology. Epistemology does not regard the processes of thinking in their actual occurance; this task is entirely left to psychology. What epistemology intends is to construct thinking processes in a way in which they ought to occur if they are to be ranged in a consistent system; or to construct justifiable sets of operations which can be intercalated between the starting-point and the issue of thought-processes, replacing the real intermediate links. Epistemology thus considers a logical substitute rather than real processes.[1]

The point of introducing a "logical substitute" for "real processes" of thought is clear. What is crucial for epistemology is not the actual train of thought which culminates in an epistemologically potent pronouncement; rather, epistemology is concerned with evaluating, with establishing the potency of, that pronouncement. Since a given claim is correct (true, probably true, warrantably assertible, etc.) independently of its psychological origin, and since epistemology (as opposed to psychology) is concerned only with evaluating such claims as to correctness (truth, probably truth, warranted assertibility, etc.), it follows that psychological origin is irrelevant to epistemology (henceforth the "irrelevance claim").

Reichenbach introduces the terms "context of discovery" and "context of justification" to illustrate the distinction between determining the psychological origin of a claim and determining the evaluative status of a claim. Since the former, for Reichenbach, is irrelevant to the task of evaluation, the context of discovery is irrelevant to epistemology: "Epistemology is only occupied in constructing the context of justification."[2] So, for example, while Kekulé's discovery of the benzene ring in his sleep before a fireplace may be of great interest for a variety of psychological investigations, all such investigations belong to the context of discovery. The evaluative task—the substantiation of the correctness of the proposed model of the benzene molecule—is the only concern that can properly be called epistemological. It alone is appropriate to the context of justification. And this substantiation depends not at all on the psychological origins of the proposed model—it matters not a bit if the model was developed painstakingly on the blackboard, came in a dream, or was found in a bottle at the seashore. It is in this sense that the context of discovery, for Reichenbach, is irrelevant to epistemology. Epistemology (as contrasted with psychology) is concerned only with the evaluation of claims, and psychological origin (the context of discovery) is irrelevant to such evaluation.[3]

It is helpful at this point to note that the relation between the two contexts is not symmetrical. Reichenbach is not concerned to demonstrate anything like a "logical gulf" between the two contexts; nor is he concerned to demonstrate any irrelevance of principles of justification to discovery. For example, it is perfectly compatible with Reichenbach's position that a scientist who keeps certain principles of justification in mind (say, that hypotheses must survive attempts at falsification; that they are likely to be "limiting cases" of previous theory; that they must not overlook crucial types of observational data; etc.) will be aided, by so doing, in the attempt at discovery. In this sense, justification *is* relevant to discovery. It is only the converse—that discovery can be relevant to justification—that Reichenbach is concerned to deny.

To sum up the discussion thus far: we have, on Reichenbach's view, two parallel distinctions: (1) the distinction between the contexts of discovery and justification, and (2) the distinction between psychology and epistemology. These distinctions are closely related, in that the context of discovery is primarily concerned with the psychological origins of (scientific) ideas, while the context of justification is primarily concerned with the epistemological evaluation of such ideas. To defend Reichenbach's distinction between the two contexts, therefore, one also has to defend the distinction between psychology and epistemology. It is a defense of this latter distinction that is the focus of the remainder of the present paper.[4]

III.

Several writers have challenged the distinction between psychology and epistemology, and have argued for fruitful interchange between the two disciplines. In a spirit of newfound camaraderie, they urge that epistemologists and psychologists have much to learn from each other. And this is, no doubt, true. Exactly how the two disciplines may fruitfully interact, however, and more specifically, exactly how psychological investigation can aid in the epistemological task of the evaluation of knowledge-claims is not clear. I shall argue in this section that while several writers have argued for relationships between psychology and epistemology of various types, none have succeeded in demonstrating the relationship necessary for mounting a serious challenge to the psychology/epistemology distinction—namely that psychological investigation can contribute to the evaluation of knowledge-claims.

1. Susan Haack, in her "The Relevance of Psychology to Epistemology,"[5] argues that psychology is relevant to epistemology, even if epistemology is narrowly construed as consisting solely, or mainly, in the task of evaluation of, or the establishment of criteria of justification for, knowledge-claims. Her argument is laudably straightforward: first she considers arguments in favor of the distinction; then, after purportedly demonstrating the inconclusiveness of these arguments, she proceeds to argue in favor of breaking down the distinction. We shall look at these moves in order.

Haack describes Reichenbach's (and Popper's) views concerning the distinctiveness of psychology and epistemology, and considers arguments (of Popper's) which purportedly support the claim that psychology is irrelevant to epistemology. Haack argues, perhaps rightly, that these arguments fail to establish the irrelevance claim, and concludes that the irrelevance claim is not established.[6] This is an astute move on Haack's part, for if she is right that the irrelevance claim has not been established, much of Reichenbach's (and my) position is weakened. However, Haack does not consider[7] the most straight-forward argument for the irrelevance claim, namely that psychological information cannot give us good reason for accepting or rejecting any particular knowledge-claim as correct (true, probably true, warrantably assertible, etc.). I turn now to a presentation of this argument.

When we seek to justify knowledge-claims, we seek to give reasons for accepting these claims as true. We may say, then, that a *proper epistemological claim*—a claim which is offered in an attempt to justify some knowledge-claim—must pass the following test: it must purport to give us good reason for taking the knowledge-claim in question to be true. The production of such reason may be taken to be a criterion of adequacy for proper epistemological claims. That is to say, a claim which purports to be a proper epistemological claim must meet the criterion of adequacy by purporting to offer good reason for taking the knowledge-claim in question to be true.[8]

Given that a proper epistemological claim must purport to offer good reason for taking the knowledge-claim in question to be true, our argument in favor of the irrelevance claim is straight-forward: a psychological claim can never be genuinely justificatory, can never be a proper epistemological claim, because it can never by itself offer good reason for taking some knowledge-claim to be true. It can only tell us what (or how) people in fact think (or describe the process by which people come to think what they think), and unless we are prepared to let the fact that people believe certain claims (or let an account of the way they come to believe such claims) count in itself as evidence for the truth of those claims, we can be assured that what or how people think tells us nothing as to the truth of their thoughts. To any such psychological information, the skeptical rejoinder "That might be what they believe (or how they came to believe it), but what reason do we have for thinking that their beliefs are true?" may be legitimately put. Which is to say, simply, that such psychological information can never by itself give us good reason for accepting some particular knowledge-claim as true. And since this is our criterion of adequacy for proper epistemological claims, it follows that no psychological claim can be a proper epistemological claim. Which is to say, psychology cannot be relevant to epistemology.

Counter-examples to the claim that psychological information can never give us good reason for taking a knowledge-claim to be true come readily to mind. For example, a simple perceptual claim might be thought to derive evidential support from a person's (a competent perceiver's) belief in it: if *X* is a competent perceiver and says "I believe that the wallpaper is green," his/her so saying does seem to provide support for the claim "The wallpaper is green." However, that such belief does count as evidence for the truth of those claims depends on epistemological argumentation, and the establishment of the reliability of such belief. For example, one might argue that because we can give general arguments in favor of inductive inferences, and because we can make reliable inductive inferences concerning certain perceptual claims, it therefore follows that establishing a person's belief in a claim, by making it subject to inductive inference, thus establishes that belief as evidence for the truth of that claim. Now, whether or not arguments of this type are correct, the fact remains that the evidence the belief provides for the assessment of truth (if any) depends on such epistemological argumentation and the establishment of reliability—not the mere fact that a person has the belief in question. Psychology can tell us that a person believes a certain claim, and, perhaps, how that person came to believe it; but not why that belief would count as evidence for the claim. Similarly, when a highly regarded person expresses a belief about a technical point in his/her field, we are inclined to count that belief as evidence for the truth of the claim: when Einstein says that he believes that Newton's argument against the relativity of rotary motion is deficient, we are perhaps inclined to count Einstein's belief as evidence for the deficiency of Newton's account. Here, however, as in the case of the competent perceiver's belief about a simple perceptual claim, whatever support a claim derives from a competent person's belief in it depends on the previously and independently established reliability of that person's beliefs. It is this independently established reliability that lends the belief whatever ability to support the claim it has: the *mere* belief by itself counts for nothing. When Einstein says that he believes that Newton's argument against the relativity of rotary motion is deficient, it is because Einstein has the belief, and the reliability of his scientific opinion is firmly established, that we may take his belief to provide some evidence for the truth of the claim that Newton's account is deficient. And even here, Einstein's belief counts not that much, if at all: we need only to look to Einstein's rejection of subsequently accepted quantum theory to establish the severe limitations of the supporting power even *his* beliefs have. In this case, as well as in the case of the reliable perceiver, it is only the fact that a person's beliefs are independently established as reliable that endows the belief with whatever support it provides. The mere belief, without such independently established reliability, offers no support whatever; it does not count as evidence for the truth of the claim in question.[9]

To regain the thread of the overall argument: psychology cannot be relevant to epistemology, so long as epistemology is narrowly construed as being concerned with justification, because psychology cannot furnish good reason for taking any knowledge-claim to be true. Since production of such reason is the essence of epistemological justification, the inability of psychology to produce such reason is decisive against psychology's alleged relevance to epistemology.

Haack is guilty of not properly spelling out the notion of "epistemological justification." Once this is seen to involve the production of reasons for counting claims as true, it is clear that unless we are prepared to count the fact that *X* believes *p* (or an account of the processes by which *X* came to believe *p*) as evidence for the truth of *p*, psychology fails to produce such reasons, and so fails to make proper epistemological claims. Haack perhaps rightly dismisses several arguments purporting to show the irrelevance of psychology to epistemology as inconclusive; however, I believe that the argument sketched above, coupled with the explication of epistemological justification offered above, constitutes a decisive argument in favor of the irrelevance claim.

Haack goes on to argue for co-operation between psychology and epistemology, but these arguments fail as well, since, as Haack admits, they "require the premise...that psychology may be relevant to epistemology."[10] Since, as I have argued, such relevance has *not* been established—and, indeed, if my argument is right, such relevance *cannot* be established—the required premise is not available to make Haack's argument work. Hence, her arguments for co-operation between psychology and epistemology, as well as her arguments against non-cooperation, fail.

Haack's argument, we have seen, is twofold. First, she argues that Reichenback simply *assumes* the irrelevance of psychology to epistemology, and that there are no good arguments to support that irrelevance claim. Second, she argues that there are arguments which show that psychology can be relevant to the epistemological evaluation of knowledge-claims. I have argued that Haack is wrong on both counts. First, there are arguments to support the irrelevance claim—the explication of what I take to be a decisive one in establishing the irrelevance claim is given above. Second, her arguments purporting to show the relevance of psychology to epistemology fail, for they depend on the defeat of the irrelevance claim, which has been, I hope, successfully upheld. I conclude, then, that Haack has not succeeded in breaking down the psychology/epistemology distinction.

2. Perhaps the most serious challenge to the distinction between psychology and epistemology is that provided by W. V. Quine, who argues in his "Epistemology Naturalized"[11] for the "naturalizing" of epistemology. Generally speaking, Quine is concerned in this paper with evaluating the progress philosophers have made in establishing the credibility of claims concerning our natural environment. He argues that, since Hume, we have made little progress. Quine pays particular attention to two types of attempts to establish such credibility—rational reconstruction, and translation. He argues that epistemological attempts of *rational reconstruction* like Carnap's—attempts to reorganize and reduce diverse bits of evidence into a conceptually more perspicuous form—fail to "endow the truths of nature with the full authority of immediate experience,"[12] and so offer no advantage in establishing the truth (probable truth, etc.) of knowledge-claims. If such fictitious constructions fail to establish such truth, Quine asks:

> Why all this creative reconstruction, all this make-believe? The stimulation of his sensory receptors is all the evidence anybody has had to go on, ultimately, in arriving at his picture of the world. Why not just see how this construction really proceeds? Why not settle for psychology?...If we are out simply to understand the link between observation and science, we are well advised to use any available information, including that provided by the very science whose link with observation we are seeking to understand.[13]

After concluding that various problems (especially those encountered by Carnap) similarly doom to failure any attempt at reduction via *translation*, Quine again urges the epistemologist to turn to psychology:

> If all we hope for is a reconstruction that links science to experience in explicit ways short of translation, then it would seem more sensible to settle for psychology. Better to discover how science is in fact developed and learned than to fabricate a fictitious structure to a similar effect.[14]

Quine suggests, then, that if we are concerned simply with understanding how we get from simple observations and sensory receptions to complex scientific theory, we might just as well turn to empirical psychology to find out how theoretical construction actually proceeds. Since how the construcproceeds is of epistemological import, and since psychology can tell us how such construction proceeds, it follows that psychology has epistemological import—which is to say, that psychology is relevant to epistemology.

There is a problem with this argument for the relevance of psychology to epistemology, however. The problem is simply put: the notion of "understanding the link between observation and science" is equivocal. It equivocates between two distinct senses of "understanding the link": (a) understanding the psychological mechanisms by which scientific theories are produced, and (b) understanding the criteria by which we select one link over and against other links, one theory over and against other theories. This latter sense, of course, demands the evaluation of competing theories; the former does not. It is the former sense, though, that is amenable to empirical psychological research; the latter is not. An account of the mechanisms of knowledge-acquisition, or the psychological processes involved in theory building, will account for the acquiring of theories we have rejected, as well as those we currently hold. Such an account, therefore, since it accounts for what we take to be "good" as well as what we take to be "bad" theories, cannot distinguish the good from the bad–which is to say, such an account cannot aid in justifying, or rationally preferring, one theory over another.[15] For example, an account of how we come to acquire views about the structure of space, since it will account for how we come to acquire the view that space is Euclidean as well as the view that space is non-Euclidean, cannot also serve to distinguish which–Euclidean or non-Euclidean–is a more justifiable construal of space. Such further distinction (between more and less justifiable knowledge-claims) requires our going beyond an account of the mechanisms of knowledge-acquisition. Quine says "we are out simply to understand the link between observation and science." Well and good. But the link will be addressed by various theries, and we will have to discern between alternative accounts before we will have succeeded in "understanding the link." How we so discern will have to do with how we evaluate the various accounts; how we assess their claims. Since an account of the mechanisms of knowledge-acquisition cannot aid in such assessment, an account of the mechanisms of knowledge-acquisition cannot, in principle, serve as well as an account of the justification of knowledge-claims. Quine's appeal to psychology can only help in accounting for the psychological mechanisms and processes of theory development–not in the rational evaluation of theory. Consequently, his appeal to psychology does not successfully challenge the irrelevance claim defended thus far.[16]

An essential clarification needs to be made at this point. I am *not* suggesting that philosophers, rather than scientists, make (or ought to make) scientific judgments which need to be justified. Scientists, not philosophers, assess the adequacy of (to use our earlier example) competing accounts of the structure of space. To this extent I agree with Quine that there is no "first philosophy" stance from which philosophers govern, or pass judgment on, the work of scientists. However, when scientists assess the adequacy of competing accounts of some aspect of nature, they do so by offering arguments, by "making cases," for one or another of the competing accounts. These arguments, or "cases", have important general features, and these general features are themselves the object of study of epistemology. An epistemologist, *qua* epistemologist, does not pass judgment on competing accounts of the structure of space; he/she does, however, study the general features of such scientific judgments, and tries to develop an account of the *justificatory force* of such (scientific) judgments—that is, an account of why the judgments made in the special sciences are (or are not) properly considered justificatory. And it is to this sort of account, I have been arguing, that psychology cannot contribute. Psychology might well contribute to an account of some particular view of the structure of space—for example, psychological information concerning a scientist's history and preferences might explain why he/she ultimately decided on a Euclidean account. But psychology cannot contribute to an account of the justificatory force the scientist's judgment has; an account of the reason we have for taking a potential justification to be (or not) genuinely justificatory. The production and study of such reason is the task of the epistemologist: the scientist, *qua* scientist, makes judgments as to the adequacy of various competing accounts for some aspect of nature; but the epistemologist, *qua* epistemologist, seeks to uncover general features which properly afford the scientific judgment whatever justificatory force it has. This is the special province of epistemology, and here is where, I am claiming, psychology has nothing to offer.

IV.

I have argued thusfar that the irrelevance claim - that psychology is irrelevant to the epistemological task of the evaluation of knowledge-claims - is correct, and that the distinction between psychology and epistemology drawn by the irrelevance claim survives the criticisms of Haack and Quine. I would like to very briefly mention at this point one of the implications of this discussion for a central problem for philosophy of education—namely the problem of conceptual change. If the irrelevance claim is correct, then psychology cannot contribute to a solution to the problem of conceptual change, insofar as that problem is thought to deal with the *epistemological adequacy* of successive conceptual schemes. Developmental psychology may tell us how stage transformations take place; but, if the irrelevance claim is correct, developmental psychology cannot tell us why a higher stage is more adequate, epistemologically, than its predecessor. This is, of course, contrary to stage theorists like Piaget and Kohlberg, whose theories suffer from an unhappy conflation of psychological and epistemological adequacy.

Full substantiation of this ramification of the irrelevance claim for philosophy of education would necessitate another paper, as would discussion of other ramifications of the irrelevance claim. I hope, however, that this brief mention of the implications of the irrelevance claim for the problem of conceptual change serves to indicate the widespread and deep implications the irrelevance claim has for philosophy of education.[17]

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[1] Reichenbach, Hans, *Experience and Prediction* (Univ. of Chicago Press, 1938), p. 5. Lewis has similarly argued that "Epistemology is not psychological description of mental states, but is critique of their cognitive claim; the assessment of their veracity and valid-

ity, and the eliciting of those criteria by which such claim may be attested." C. I. Lewis, *An Analysis of Knowledge and Valuation* (Open Court, 1946); reprinted in C. Landesman, (ed.), *The Foundations of Knowledge* (Prentice Hall, 1970), p. 19.

2. Reichenbach, *Experience and Prediction*, p. 7.

3. A longer and more detailed explication of Reichenbach's view is provided in Scheffler, Israel, *Science and Subjectivity* (New York: Bobbs-Merrill, 1967), pp. 67-73.

4. A longer version of this paper also defends Reichenbach's original distinction between the contexts of justification and discovery from recent criticisms levelled at it. The longer version, titled "Discovery, Justification, and the Naturalizing of Epistemology," is forthcoming in *Philosophy of Science.*

5. Haack, Susan, "The Relevance of Psychology to Epistemology." *Metaphilosophy* 6 (1975): 161-76.

6. Ibid. pp. 163-71, esp. p. 169.

7. It must be noted that Haack is not to blame for this, since, while straightforward, this argument has not to my knowledge been explicitly formulated before.

8. It goes without saying that how such truth is established is a not yet clearly answered question. I certainly don't propose to answer it here. My point is only that, unless a claim at least *purports* to offer reason for taking a knowledge-claim to be true, that (former) claim cannot count as a proper epistemological -- and hence potentially justificatory-- claim. A slightly altered formulation of this point is given in my "Piaget's Conception of Epistemology", *Educational Theory* 28 (1978) pp. 19-20.

9. I am indebted to Max Black, Hardy Jones, and Israel Scheffler for suggestions concerning this point, and to Black for suggesting the rotary motion example.

10. Haack, "The Relevance of Psychology to Epistemology," p. 175.

11. Quine, W. V., "Epistemology Naturalized," in Quine, W. V., *Ontological Relativity and Other Essays* (Columbia University Press, 1964), pp. 69-90.

12. Ibid., p. 74.

13. Ibid., pp. 75-6.

14. Ibid., p. 78.

15. After this section of the present paper was in draft, the same point was made to me by Hugh G. Petrie (personal correspondence).

16. I have argued elsewhere (my "Piaget's Conception of Epistemology", op. cit.) that Piaget's arguments for the relevance of psychology to epistemology suffer from related confusions and equivocations. Consequently, even though Piaget deserves consideration as another who argues against the psychology/epistemology distinction, I will not do so here.

17. I should like to thank Max Black, Lyle Eddy, Sing-nan Fen, Robert Halstead, Sophie Haroutunian, Ralph Page, Hugh Petrie, Israel Scheffler, and the members of the Philosophy Department of the University of Nebraska-Lincoln, especially Hardy Jones, for helpful comments on and criticisms of earlier drafts of this paper.

THE RELEVANCE OF PSYCHOLOGY TO EDUCATIONAL EPISTEMOLOGY

Robert Halstead
University of Illinois U.C.

Epistemology, on any account with which I am familiar, is the study of the nature of human knowledge. So far as that definition goes, the following phenomena would seem to be fit for epistemological research: people think certain things, they fiddle with objects to see how they work, they form groups of people interested in the same ideas or phenomena, they build equipment to help them work, they train others to do what they do, they write books and articles and go to conferences, they change their minds, different individuals or groups hold different beliefs and do or do not argue about them, they decide that previous generations had silly ideas, they accept or reject funding from corporations, governments, aristocrats or other sponsors to help their work, and they engage in these and other activities for a variety of reasons. All this would seem to be associated with human knowledge and its development, yet much of it could clearly be studied by historians, sociologists, political sciencers, anthropologists, and psychologists, as well as philosophers. But, some would hold that epistemology is a part of philosophy only and that historical, sociological, and psychological research is not epistemology.

A central thesis of analytical philosophy, and analytical philosophy of education, has been that there is a clear distinction between epistemology and psychology. Epistemology, it is said, is concerned with the nature of knowledge; psychology (in part) is concerned with how knowledge is acquired. The issue of whether there is such a clear distinction between epistemology and psychology is complicated by the fact that there are a number of concerns intertwined with it, e.g., how (if at all) is philosophy to be distinguished from other disciplines; what is the relation between our knowledge and the world; what is it to be rational? Part of the appeal of the view that there is a clear distinction between psychology and epistemology is that it seems to be based upon, or entail, fairly clear answers to these questions.

In order to argue against the distinction effectively, I think it is necessary to locate the distinction within the context of the epistemological programs which make it plausible, and then show that those programs are unsatisfactory. This will require that we look at a rather broad range of problems, though this will be made somewhat, if not much, more specific by focusing on problems recently raised with respect to the nature of scientific knowledge. I shall argue that it is an error to limit epistemology to the analysis of knowledge-claims, or propositions, and that this "propositionalism" is at the heart of the distinction between psychology and epistemology. Once it is seen that propositionalism is unsatisfactory, we will have grounds for saying that there is no clear distinction between psychology and epistemology of the sort recommended by four out of five leading analytical philosophers. I shall further attempt to say what kind of psychological research would be relevant to epistemology, and briefly—because I trust Ralph Page will take this up in his paper—how all this bears upon education concerns.

I. TWO ARGUMENTS AGAINST RELEVANCE

It seems to me that there are two general lines of argument which are most often employed in the effort to distinguish epistemology from psychology and other disciplines which study human thought and action. Although the two lines of argument are different in some important respects, they do have crucial elements in common. These two lines of argument do not, I think, simply take two givens—epistemology and psychology—and show how they differ; rather, in making the distinction, they create different domains for each.

The first line of argument for an epistemology/psychology distinction is roughly that developed by Hans Reichenbach and more recently defended by Israel Scheffler. The distinction is closely related to Reichenbach's notorious distinction between the "context of discovery" and the "context of justification." The general idea is this: one can get an idea from dreams, analogies, sudden insights, etc. These sources, however, can produce silly ideas as well as profound ones. Thus, considering only the psychological source of an idea will not tell one whether the idea is a good one. What justifies one's holding an idea is a separate question. The context of discovery has to do with the source of ideas; the context of justification with the evaluation of ideas. Psychology studies the context of discovery; epistemology studies the context of justification.[1]

Reichenbach further places considerable emphasis on the fact that "there is a great difference between the system of logical connections of thought and the actual way in which thinking processes are performed."[2] Psychology examines how thinking actually occurs, but epistemology attempts to provide a rational reconstruction of the chain of logical interconnections necessary to justify the thought in question. Here we can see that where Reichenbach has been talking about "thoughts" and their relations, what he in fact has in mind is claims, and other claims which can serve as their logical support.[3] As Scheffler says, epistemology

> addresses itself in the first instance not to the psychological background of the thought in question, nor to the process of its development, but rather to the ideal elaboration of its own product, as a purportedly logical argument.[4]

The central phenomenon of epistemology, according to this, is not the thought, but its verbal expression in public language: a knowledge-claim.

The point of this epistemological reduction, the paring away of psychological influences and the rational reconstruction of thought into knowledge-claims and alleged arguments, is to determine whether the thought or knowledge-claim is rationally justified. The psychology/epistemology or discovery/justification distinctions function as impermeable membranes preventing subjective or non-rational considerations from contaminating the evaluation of knowledge-claims.[5] The psychological source of an idea is irrelevant to whether it can be justified as knowledge.

According to Scheffler, in broad outline, the epistemological requirement for a knowledge-claim to be rationally justified by its support is "material and logical persuasiveness."[6] I take this to mean, in the case of a scientific theory, that a theory is to be assessed on the basis of empirical evidence and the logical adequacy of the inference from the evidence to the theory. The choice between alternative theories is to be made on the basis of which best satisfies the requirement. The rational development of science, on this account, involves the following: empirical observational generalizations are to be retained over time; theories which are to account for these generalizations are either rejected as they are proven wrong, or incorporated into newer theories as logical implications of the newer theories (intertheoretic reduction), or simply retained as they are.

I mention science at this point because it is precisely in the area of science that Reichenbach's epistemological program has recently been called into question. In effect, Thomas S. Kuhn[7] and others have argued that some theory changes in science have failed to be rationally justified by Reichenbach's standards. As you all know, this conclusion has been variously greeted by horror and hosannas, and has produced an enormous amount of confusion. I would like to take a quick look at how the problem is generated.

The cases upon which Kuhn and others focus are those in which choices between theories must be made and the theories in question involve different meanings for crucial terms. For example, in the choice between the phlogiston and oxidation theories of combustion, "combustion" has different meanings in each theory. Now, each theory will be to some extent rationally justified in its own terms, but how is a rational choice between them to be made? Although the two theories may each be internally logically coherent, they cannot be directly compared in terms of their logical structures on pain of equivocation, for they accord different meanings to crucial terms. In addition, the meaning of the empirical generalizations which function as the evidential premises in the rationally reconstructed arguments will also differ, so that the choice cannot be made on the grounds of evidence, observational fidelity, etc. Thus, it would appear that major developments in the history of science such as the adoptions of heliocentrism, the law of fixed proportion of compounds, and the oxidation theory of combustion were rationally unjustified. It is an embarrassment to Reichenbach's epistemological program if it turns out that the major developments in the history of science were non-rational by his standards.

The point of Israel Scheffler's 1967 work, *Science and Subjectivity*, is to show that Kuhn's arguments do not undercut the rationality of science and that Reichenbach's epistemological program is unaffected by those arguments. The cornerstone of Scheffler's response to Kuhn's work is the idea that although crucial terms in the competing theories may have different *senses*, the terms may *refer* to the same things. Thus, he believes that prior theories may be logically reduced to their successors—e.g., that Newton's theories are implications of Einstein's under certain specifiable conditions—and that it is possible to adjudicate between two theories on the grounds of the comparative adequacy of their accounts of their shared referents. So, for Scheffler, differences in sense-meanings between the theories raise no problems so long as there is no difference in reference-meanings, because "a truth about an object is equally true of it no matter how the object is designated."[8]

The central difficulty for Scheffler's solution to the problem of competing conceptual frameworks is whether the sense-reference distinction can be usefully applied to this problem. On Scheffler's account, if a theory choice or theory reduction is to be made rationally, presumably scientists must be in a position to know when two terms (or a term with two different senses) designate the same object.[9] Now, in some cases, it is difficult to see how this advice is to be followed. How are the Newtonian and the Einsteinian physicists to know whether they have designated the same objects by their use of the term "mass"? As Suppe has noted, it is often true in science that the only way to check whether two people share reference with theoretical terms "is to consider the senses they attach to them."[10] In such cases, the sense-reference distinction is not helpful.

The problem is not limited to such cases, however. Scheffler's picture of language is that words are somehow connected to objects in reality. Thus, he would say, so what if two scientists use different words, or the same word with two different senses, to pick out an object? So long as what they say about the object so picked out is true, it doesn't matter. But, the scientists must be able to judge that they have picked out the same object in reality. And, what they take to be the object(s) picked out will be partly dependent on their conceptual frameworks. They are not in the position to check directly whether their words refer to the same real objects; they can only check whether they refer to the same objects as they perceive them given their respective representational schemes. What they take the objects to be is influenced by the senses of the terms they employ. The sense-reference distinction would only help if we had some way, independent of the sense of terms, to know when they refer to the same (real) objects. But we have no way to do that.

The point can be approached from a different direction. Even if two scientists agree on the application of a term or terms to a given object as they perceive it, their terms will of course refer to more objects than that one. Since it is typically impossible to check whether they agree on all the referents of their respective terms, it would seem that a consideration of the sense of the terms is necessary to determine how the scientists *would* apply them to other cases.[11]

In order to dissolve the problem of differences in sense-meanings, Scheffler has to depend on stability and commonality of reference to objects in reality. Unfortunately, he has not provided a means by which we can know that reference to real objects is historically stable or shared at any given time. More importantly, the scientists are not in a position to know directly that they share reference to real objects. Focusing upon reference-meanings will not then explicate the rationality of the theory choices and theory reductions (or incorporations) which scientists do make. The line of argument developed by Reichenbach and Scheffler requires an unproblematic relation between language and the world, which is not available, in order simply to focus on knowledge-*claims.* Before discussing the implications of this more fully, I would like to turn to the second line of argument for an epistemology/psychology distinction.

The second line of argument for a radical distinction between psychology and epistemology is that employed by ordinary-language analysts. In the end, they arrive at a context of discovery/context of justification distinction, though the argument is somewhat different from that which we have just seen. Basically, the argument is this: There is a fundamental distinction between conceptual questions and empirical questions, between questions of meaning and questions of the way the world is. The question "What is the nature of knowledge?" is a question about the *concept* of knowledge which is dealt with by that branch of philosophy concerned with knowledge, viz., epistemology. Any empirical study of knowledge must employ a conception of knowledge. In other words, the concept of knowledge and its analysis is logically prior to any empirical research about knowledge. Thus, while empirical study may tell us how knowledge is acquired, what conditions are conducive to discovery, etc., such empirical research cannot tell us what knowledge *is.* This is simply because the empirical research *presupposes* an analysis of knowledge, or the empirical researcher would not even know where to begin. Psychology, as an empirical discipline, cannot settle the epistemological question of the nature of knowledge.

One educational epistemologist who clearly employs this sort of argument is Paul H. Hirst.[12] It is most apparent that Hirst uses this argument when he discusses what it is to think historically.

> At first sight it might be thought that to discover what historical thinking is, we must somehow carry out psychological investigations of the thought processes of historians when doing their job... [but] ... how can you empirically investigate until you know the criteria of what you are looking for? And it follows from this that the criteria of what constitutes historical thinking must be found independently of such investigations. The only way in which we can successfully distinguish different forms of thought is in fact by reference to the particular set of terms and relations which each of the distinct forms of thought employs. These terms and relations are fully public, and if, therefore, we wish to characterise, say, scientific or historical thought, we must do this in the first place by examining the distinctive features of scientific theories and laws or historical explanations.[13]

In this passage, Hirst argues from the thesis that conceptual questions are distinct from and logically prior to empirical questions to the thesis that epistemological questions are distinct from and logically prior to psychological questions.

Hirst makes this distinction as part of his attempt to articulate the forms of knowledge theory which is the epistemological basis of his view of the nature and justification of the liberal education curriculum. I would like to remind you of the broad outlines of Hirst's epistemology. Knowledge, he says, is composed of different "forms of knowledge" such as science, math, and moral knowledge. Knowledge itself consists of propositions: "The labels I have used for distinct forms of knowledge are to be understood as being strictly labels for different classes of true propositions."[14] These propositions are classed into forms by their distinct concepts, logical structures, and truth criteria.[15]

With Hirst, as with Reichenbach, the question of rational justification plays a central role in the epistemological theory. Hirst characterizes rationality in terms of the three criteria he uses to distinguish among propositions in order to identify the forms of knowledge. Thus, rationality in science is a matter of employing publicly rooted concepts and assessing claims by accepted procedures of empirical experimental and observational tests. Hirst's view turns out to be similar to that of Reichenbach and Scheffler in the following respect: questions of the rationality of thought are reconstructed into questions of the logical adequacy of arguments for claims or propositions, formulated in a public language, which constitute knowledge. The reconstruction is justified on the grounds of an epistemology/psychology or justification/discovery distinction.

Given this explication of Hirst's theory, how is he to account for the rationality of theory choice in science? The alternative theories will typically employ "publicly rooted concepts", I would imagine,[16] but they will not utilize the same concepts. Hirst's first criterion for rationality does not help. Both theories will have experimental or observational test support, but the empirical evidence may not show one theory to be superior to the other, because the evidence is understood differently in each. So, a choice of theories under such conditions must on Hirst's view fail to be rational, because the concepts of the competing theories are different and experimental or observational procedures will not settle the dispute. There are simply two different propositional structures and hence no reason can be given for accepting one and rejecting the other.

Hirst has two primary responses to the problem of meaning change or conflict, as best I can determine: that there must be less of it than some suppose, and that to the extent that it is found, we are prevented by the "bounds of sense" from saying anything about it (other than that we cannot say anything intelligible about it).

The hints of arguments Hirst gives are not very persuasive. First, he focuses on apparent conceptual continuities across time and communities, and attempts to infer from these that it is unlikely that there are significant discontinuities.[17] But, this will not do, for one could equally well focus on the conceptual discontinuities noted by historians of science and anthropologists, and argue that conceptual continuities are unlikely. The point is, both stability and change of concepts need to be accounted for.

Second, he suggests that the world, as it is independently of our concepts, operates as a constraint upon thought. As he grants that our experience of the world depends upon the concepts we have, however, he needs to say *how* the world affects our concepts. His only comment here is that we agree in our judgments of application of concepts to the world. But, the problematic cases we are considering are precisely those in which agreement in judgment does *not* seem to obtain. We need an account of how agreement in judgment is possible and of the role of the world in this.

Third, Hirst claims that all societies are concerned with objectivity—and hence the "given"—and intelligibility, so reason is not relative. But, on his own account, intelligibility and rationality, and what we take to be objective reality, depend upon the concepts of a group at a time. He grants that there are at least some conceptual differences across time and cultures. This leaves open the possibility that, though there may be a common concern with objectivity and intelligibility across time and cultures, objectivity and intelligibility in fact differ across time and cultures, and reason is relative.

Finally, Hirst seems in places to embrace just that conclusion, for he says that intelligibility is tied to the concepts we have, and that to go beyond those concepts is to ignore the "bounds of sense" and produce nonsense.[18] This would seem to imply that changing concepts is non-rational, and also that we can give no explanation of the rationality of prior conceptual changes. All that we can intelligibly discuss is claims using the concepts of our current "forms of knowledge" in accordance with the logical structure of the propositions which are constituents of the forms. Hirst's theory makes the development of science rationally discontinuous.

II. THE PERILS OF PROPOSITIONALISM

What I have attempted thus far is (1) to explicate how two traditions in philosophy arrive at a psychology/epistemology distinction, (2) to note that these traditions then characterize knowledge in terms of propositional structures, and (3) to suggest that recent work on theory choice and theory reduction in the history of science, together with these epistemological views, leads to the conclusion that the development of science is non-rational.

I would argue that what is responsible for this conclusion is the reasoning that produces a characterization of rationality and knowledge wholly in terms of systems of propositions. This view, which I shall call in all its variations "propositionalism," is a deeply entrenched part of Western philosophical thought.[19] As we have seen, both Hirst and Scheffler attempt to maintain a psychology/epistemology distinction, and propositionalist epistemologies, by explaining away the problems raised by Kuhn et al. They do not succeed.

Interestingly enough, both Hirst and Scheffler do on occasion introduce considerations which would contribute to dealing with the problems: Scheffler by invoking the role of the purposes of science in theory choice,[20] and Hirst by reference to "the stability and near universality of very significant features in human nature and the human situation,"[21] among other things. Whether or not these features are as stable and universal as Hirst claims, human nature and the context in which humans live are, I think, important in understanding human knowledge. The problem for Hirst and Scheffler is that the propositionalist epistemology gives no role to these and other significant factors.

Propositionalism takes as knowledge the outcome of scientific or other inquiry, expressed as propositions. The context of discovery/context of justification distinction requires that all we attend to in epistemology are the formal requirements for justifying propositions. This, I have argued, produces the conclusion that science is non-rational, for the requirements are not met in science. The motivation behind propositionalism is, I think, obvious enough: to get as clear and specific as possible about what is to count as knowledge, and to establish standards for evaluating candidates to the status of knowledge. Moreover, the discovery/justification distinction is intended to set aside subjective psychological factors which are not relevant to knowledge. The distinction, however, does this in all too undiscriminating a fashion. The focus upon claims or propositions omits aspects of knowledge and these aspects are relevant to the rationality of the development of knowledge.

The justification/discovery distinction has ruled out of court a number of elements of knowledge to which we must attend. These include matters such as the recognition of which problems need to be solved, what the purposes of science are seen to be, what the actual background knowledge available to scientists is or was, and what experimental procedures and technological means are available. In addition, the social relations of inquiry contribute to its development in a variety of ways. The social relations constrain the sorts of ideas one can entertain, encourage the development of some ideas and discourage others, and they are the source of ideas and problems. The very ability of scientists, or other scholars, to recognize phenomena and problems in the field appropriately depends upon their socialization into the field. Furthermore, the differential willingness of different scientists to accept new theories plays an important role in the *rational* process of insuring that new theories get a fair hearing, but that old ones are not rejected too easily. All these elements, I would urge, are part of the rational development of scientific knowledge, they cut across the justification/discovery distinction, but they are not amenable to a propositional analysis.

Consider, for example, Scheffler's response to Kuhn's argument that accepting a new theory effects a gestalt reorganization of one's perception. Thus, Kuhn says, one's perception of the "facts" of the case is different from what it was prior to accepting the theory, and he refers to this as a "conversion experience". Scheffler points out that scientists do not in general "appeal to their own conversion experiences in *defending* a new paradigm."[22] Scheffler is claiming that the conversion experience is irrelevant to epistemology because it has no role in justifying a claim or set of claims. But that simply presupposes the distinction Scheffler is defending, and the propositionalist epistemology. It is enough that the conversion experience be necessary to see certain phenomena as evidence for a theory for it to have a properly epistemological role. The gestalt switch is not a "merely psychological" fact about scientists; it enters into their knowing the theory and has an important part to play in whether they accept the theory.

III. TOWARD AN ALTERNATIVE EDUCATIONAL EPISTEMOLOGY

I would now like to sketch an alternative approach to educational epistemology. The first question is, how are we to represent human knowledge? Propositionalism is one way of representing knowledge, but it is not able to give an adequate account of an important aspect of knowledge—its development. It also ignores questions of who holds beliefs or claims, and the manner in which they are held. As I have argued elsewhere, there are individual differences in conceptualization,[23] and a focus on claims in public language fails to capture the nature of the understanding possessed by individuals. My suggestion is that we need an alternative epistemology which is concerned to characterize the ways of understanding employed both by individuals and by groups.

There are a number of requirements which must be met by an epistemology of group or collective understanding, as the discussion up to this point should indicate. Such an epistemology will have to be able to account for theory choice and the development of areas of group inquiry such as science and its subdivisions. Group inquiry, it seems to me, is best conceived of as a collective *practice* involving actions, and utilizing various means—such as instruments, experimental methods, and theory formalization[24]—in order to achieve shared purposes. An adequate account of this must attend to how it is that individuals are socialized into such practices, and what the limits of such socialization are, if we are fully to understand what group knowledge comes to. Within this, we need to learn how it is that individuals come to share meaning through socialization, and how it is also possible for occasional individuals to break away from this socialization and achieve novel conceptualizations.

What I want to emphasize here is that we need to know more about how in fact knowledge is and has been developed, and how intellectual enterprises operate, in order to give a more adequate characterization of collective human knowledge. Part of this will involve the way in which the social character of collective intellectual enterprises both limits and encourages the development of novel ideas under varying circumstances. Thus, a good deal of sociological and historical inquiry is needed for the epistemological program proposed here.

That is, however, only part of the picture. We also need a characterization of individual understanding. On the one hand, there will be differences among individuals not simply in the experiences they have had, but also in how they conceptualize their experiences.[25] On the other, the notion that individuals have utterly idiosyncratic conceptual schemes is, I believe, incoherent. The concepts of individuals will certainly be partly social in character, though that is insufficient to insure complete uniformity of conceptualization. Conceptualization is also influenced by the fact that it takes place through our acting in the world. Though we have no direct access to the way the world is, the world does constrain our actions and thus indirectly how we conceive of what we do and how the world is.

A more adequate characterization of individual understanding will give an account of the conceptual diversity among individuals, not just to determine how individuals acquire their concepts, but to explicate what these concepts are. This will involve the study of the exemplars upon which individuals, consciously or unconsciously, model their inferential procedures and applications of the concepts of public language. I would argue that the processes by which individuals construct their concepts—involving the actions in which they engage and their social interactions, and influenced by their interests and environing circumstances—are part of what the concepts come to for individuals, how future applications will be made, and why communication breakdowns do sometimes occur.

It should be obvious from this sketch that I see the construction of a theory of individual understanding as requiring psychological research into the activities, interests, and cognitive procedures of individuals. The psychology/epistemology distinction impedes the development of a theory of individual understanding.

Finally, I want to discuss briefly the proposed view as an *educational* epistemology. It seems to me that most discussions of curriculum construction, the justification of required courses, indoctrination, the school's role in promoting false consciousness, etc., are vitiated by a presupposed propositionalist epistemology which cannot adequately describe the effects of these on individuals.

According to the epistemological program proposed here, what is at stake educationally is not the acceptance or rejection of claims. It is rather, what sort of intellectual resources are to be promoted or limited? These resources will include interests and purposes, organizations of perception, capacities for action, value commitments and preferences, inferential procedures and schemes of conceptualization, abilities to engage in collective action, inquiry, and discourse—a host of skills, abilities, and tendencies. Psychology can surely contribute to the further specification of these aspects of human knowledge.[26]

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1. I do not believe that the two distinctions are quite parallel, however, because historical and sociological studies of knowledge will, on Reichenbach's account, be concerned with the context of discovery. The context of discovery is thus something of a garbage category for all influences on knowledge and its development which do not meet Reichenbach's standards for contributing to justification.

2. Hans Reichenbach, *Experience and Prediction* (Chicago: University of Chicago Press, 1938), p. 5.

3. It is less clear how Reichenbach gets to this point; surely not by argument. He begins by discussing the "internal relations" of knowledge by means of the example of the relation among astronomers, telescopes, and stars, moves to talking about thinking and thought-processes, then the "system of logical interconnections of thought" and finally the rational reconstruction of thoughts into claims and formal arguments for their support. It is a fast trip. See, ibid., pp. 3-5.

4. Israel Scheffler, *Science and Subjectivity* (Indianapolis: Bobbs-Merrill, 1967), p. 71.

5. Actually, the membranes are semi-permeable in one direction, as Harvey Siegel has pointed out. Justification procedures can influence the genesis of an idea, and that *by itself* does not affect the distinction. See Harvey Siegel, "Can Psychology Be Relevant to Epistemology", elsewhere in this volume.

6. Scheffler, p. 71.

7. Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago: University of Chicago Press, 1962).

8. Scheffler, p. 57.

9. If scientists do not know this, they might still make the right choice, or perform a proper reduction, but they would not presumably do this rationally.

10. Frederick Suppe, "The Search for Philosophic Understanding of Scientific Theories", in *The Structure of Scientific Theories*, (ed.) Frederick Suppe (Urbana, Il.: University of Illinois Press, 1974), p. 203 n. 520.

11. But this would not, again, say anything about objects in reality.

12. It is also, I believe, used by others, including R.F. Dearden, *The Philosophy of Primary Education* (London: Routledge and Kegan Paul, 1968), and D. W. Hamlyn, "The Logical and Psychological Aspects of Learning," in *The Concept of Education*, (ed.) R.S. Peters (London: Routledge and Kegan Paul, 1967).

13. Paul H. Hirst, "The Logical and Psychological Aspects of Teaching a Subject," in *The Concept of Education*, (ed.) R.S. Peters (London: Routledge and Kegan Paul, 1967), p. 46.

14. Paul H. Hirst, *Knowledge and the Curriculum* (London: Routledge and Kegan Paul, 1974), p. 87.

15. Ibid., p. 85.

16. Perhaps, on Hirst's view, the newer theory will not yet have sufficiently public concepts. If so, the choice of the newer theory will be non-rational on Hirst's view, which supports the contention developed here that Hirst's position renders conceptual change non-rational.

17. Ibid., p. 94.

18. Ibid., p. 93.

19. It is sufficiently well-entrenched that, I believe, even Kuhn's treatment of rationality suffers from its intrusions.

20. Scheffler, p. 82.

21. Hirst, *Knowledge and the Curriculum*, p. 94.

22. Scheffler, p. 79.

23. Robert Halstead, "Cognitive Structures and Forms of Knowledge", in *Philosophy of Education 1977*, (ed.) Ira S. Steinberg (Urbana, Il.: Educational Theory, 1977).

24. It is of course true that scholars use formalized theories. Within the proferred view, however, how this is done is an epistemological question, not an epistemological given.

25. See Robert Halstead, "Cognitive Structures and Forms of Knowledge".

26. For further expansion of these points, see Robert Earl Halstead, "Collective and Individual Understanding in Education," unpublished Ph.D. dissertation (Urbana: University of Illinois, 1978).

EPISTEMOLOGY, PSYCHOLOGY, AND TWO VIEWS OF INDOCTRINATION

Ralph C. Page
University of Illinois, U.C.

"Celebrated" is what Harvey Siegel calls Hans Reichenbach's distinction between context of justification and context of discovery. "Nortorious" is what Robert Halstead calls the same distinction. This illustrates the disparity of view afforded by either side of a great divide running through our intellectual heritage. Alternating between these perspectives can change dramatically the appearance of education. To demonstrate this, a single educational issue, indoctrination, will be considered briefly from positions on either side of the divide. Even this cursory glance will reveal two views of indoctrination differing so sharply from one another that, from each, the other appears to be a non-starter rather than a competitor.

In 1973, Ian Gregory remarked that philosophy of education in its "analytic" guise had come close to building a "literature" only in the corpus of writing devoted to the analysis of indoctrination. The collection of analyses in Ivan Snook's *Concepts of Indoctrination* are representative of the work to which Gregory referred.[1] It is to this literature and its immediate offspring that we can turn for a view of indoctrination from the side of the divide defended by Siegel. Here we find fairly clear-cut demarcations between context of discovery and context of justification, achieved in part by an emphasis on the role of belief, where belief is represented by propositions which are amenable to justification without appeal to the genesis of a larger system of thought.

There is a strikingly pervasive agreement in these analyses that indoctrination always involves "shaping of belief."[2] This agreement is attained in part through an affinity for what Halstead has called "propositionalism"; without this affinity the reasons given for the "shaping of belief thesis" would not be compelling. This emphasis on belief as set out by propositions also tends to center the discussion on *claims* rather than the process of inquiry, and tends to isolate the justification of claims from the context in which reasoning takes place. This connection between indoctrination and belief, and the justification for it, thus works in several ways to situate this view of indoctrination comfortably on Siegel's side of the divide.

There are two basic reasons offered repeatedly in this body of analytic philosophy of education for linking all cases of indoctrination with belief. The first reason is that paradigm cases upon which the analyses are based indicate that "indoctrinating has to do entirely with 'teaching someone *that* ...' " where the phrase is completed with some proposition which represents a belief.[3] It is frequently claimed that "it would be unusual to say that we indoctrinated someone in the activity of swimming or the successful manipulation of an automobile"; it is claimed that the paradigm cases do not seem to involve teaching some *to*, but seem to involve teaching people *that* certain things are the case.[4]

One of the immediately noticeable things about this argument from paradigm cases is that the cases must be stretched a bit to fit the argument. Many of the cases cited in this body of analyses include inculcation of a self-concept (which often involves a range of attitudes, perceptions, personality traits and other factors), of loyalties and dispositions, of emotions, and of other related factors. For example, we find the following "uncontentious example" of indoctrination in an introductory book designed as much to summarize the literature as to offer innovations. At a "Catholic School in which all the teachers are committed Catholics and where all the children come from Catholic homes and have parents who want them to be brought up as Catholics," we find "the teachers are determined to try to bring up the children as devout Catholics." This might involve, as the authors claim, attempts to "inculcate in their pupils an unshakable commitment to the truth of Catholicism and of the various claims or propositions associated with it," but it takes some stretching to fit all that it takes to be a devout Catholic into assent to various propositions such as "The Pope is infallible" (to take one of the examples from this book).[5] There are emotional experiences and capacities, understandings, perceptions, commitments, actions, habits and many other things which are at least as important as belief when it comes to being a devout Catholic. Even the authors' mention of *unshakable* commitment suggests that an important feature of this example will be lost when attempts are made to cast the case entirely or even principally in terms of propositionalized beliefs. In another example, John Wilson asks whether teaching children "*to see things in a certain way*" could be indoctrination, and answers that it will be up to empirical psychology to give us the answer by telling us whether this way of seeing things increases or diminishes the child's "rationality, in the sense of his appreciation of and control over reality."[6] In another paper, the same author frames indoctrination in terms of cases which diminish the human *personality*.[7] If the rewards are great enough, we *can* maintain the position that indoctrination always (and predominantly) involves shaping of belief, but these paradigm cases by themselves do not present sufficient reward. Casting the issues in terms of beliefs and propositions carries rewards when one's perspective is from Siegel's side of the divide, however, and therefore from this perspective the shaping of belief thesis looks attractive.

In addition to this argument from paradigm cases, a second reason for holding the shaping of belief thesis is common in this literature. It is said that we must distinguish indoctrination from conditioning and physical coercion. This is succinctly stated by Wilson in two papers both of which use the same wording:

> Roughly, if I illegitimately (whatever this may mean) persuade a child to think that God will punish him for masturbating, this is indoctrination; if I give him a feeling of fear and repulsion about it, this is conditioning; if I tie his hands behind his back, this is force.[8]

As with the previous argument for the shaping of belief thesis, this argument can account for the widespread agreement about beliefs and indoctrination only if located in a family of other tenets associated with Siegel's position. First of all, claims about the existence of conditioning episodes are only as plausible as the research program in which such claims have their home. These philosophers tend to find psychological behaviorism a contentious family of theories at best. Secondly, Wilson clearly intends that the "giving" of fear and repulsion be seen as distinct from the "persuasion" he mentions in connection with indoctrination; the disposition to feel fear in the case of conditioning must be the result of non-cognitive or non-rational factors. There may be emotions, however, including some types of fear and repulsion, which cannot be so induced if those emotions are *constituted*, at least in part, by judgments or appraisals of value. Arguments for this constitutive link between judgments and emotions have been produced by some of these philosophers of education themselves, and these philosophers tend to sympathize with various parts of other similar arguments.[9] Finally, Snook has pointed out that even when we grant the existence of conditioning, the distinction between conditioning and indoctrination may collapse. If a person has been indoctrinated to believe that something is true, and then that person continues to act as if he still believes it even though he *says* he no longer does, is he still in an indoctrinated state?[10] Snook's point in asking this question is that it seems on the one hand that it is only trivially plausible to say the person is not still indoctrinated, but on the other hand the case looks very much like a case of conditioning, too. Protection of the indoctrination–conditioning distinction, and the shaping of belief thesis, can be done but it requires further stretching. We can point to other indoctrinated beliefs which explain why the person continues to act as though he is indoctrinated even though he is no longer indoctrinated with respect to the originally considered belief. Or, we can point to concomitant conditioning which occurred along with the original indoctrination in order to explain why he continues to act as though he is indoctrinated even though he is not any longer indoctrinated. The first response requires that we either find or accept on faith the existence of other parallel indoctrinated beliefs, and the second response requires that we similarly locate parallel conditioning. A fairly natural response, which is not open to us if we want to protect the indoctrinating-conditioning distinction and the shaping of belief thesis, is to link beliefs more closely with a person's actions rather than his proclamations. We might say that a person still believes that which he was originally indoctrinated to believe when his actions continue, regardless of his protestations to the contrary. This would muddy the very sharp distinctions between "learning that," and "learning how" or "learning to"; thus, we would have cast into doubt the first argument for the shaping of belief thesis and have remaining only the paradigm cases which by themselves indicate the desirability of alternative approaches.

This emphasis on shaping of belief, and on propositional accounts of belief, leads toward an essentially epistemological view of indoctrination, where epistemology is conceived as distinct from psychological and sociological conditions under which beliefs develop. Acts of *believing* may be inseparable from psychological and sociological factors, but propositions can be *logically* related to evidence and argument apart from such factors. Disagreements about the concept of indoctrination thus become disagreements about the proper justification of propositions. Anthony Flew has indicated just this,[11] and the point is also illustrated in the Woods and Barrow book already mentioned. After describing the "uncontentious example" of indoctrination involving the Catholic school and Catholic parents, Woods and Barrow proceed to use the word "proposition" or one of its cognates almost twenty times in the next three pages. Immediately following is a discussion of rationality which is dominated by issues of logicality and evidence for single propositions.

These analyses of indoctrination often take contrary positions in the well-known debate about the importance of intentions, methods, content or consequences in indoctrination, and there are certainly a variety of epistemological positions reflected in these analyses. However, all of these analyses *do* take an epistemological stand on the justification of belief, regardless of whether they emphasize intentions, methods, content or consequences, and all the stands taken are of three basic types or some combination of these three types. None appeal to the genetic considerations that Halstead argues are essential to epistemology; all respect the distinctions that Siegel argues are essential to espitemology.

The first approach is appeal to what might be called "basic facts." For example, James Gribble writes that to avoid indoctrination we must avoid teaching as true doctrines whose truth cannot be supported by evidence which is "publicly available." "Publicly available" evidence means that "anyone who tests the evidence will come to the same conclusion."[12] Hugo Meynell writes in an almost identical fashion, saying that "it would almost universally be agreed that there are facts which are to be found out by intelligent and reasonable questioning of the available evidence."[13] Patricia Smart writes that we do not "usually talk of indoctrinating plain observational statements."[14] One can find in other work as diverse as that of R.F. Atkinson, Anthony Flew, I.A. Snook, John Wilson and R.G. Woods a tendency to exclude from indoctrination inculcation of belief which can be "anchored" in this kind of factual evidence. This tendency explains in part the trend in this literature to center worry about indoctrination on fields such as ethics, religion, politics, and other "non-factually based" enterprises.

The second approach is appeal to a method of justifying beliefs, rather than appeal to any particular beliefs (factual or not). The slogan here might be "to avoid indoctrination, teach students how to think but not what to think." Kurt Baier writes that "we do not speak of indoctrination in the case of teaching chess or geometry because there we are only teaching how to do these things"; it cannot be indoctrination when it involves teaching only methods for conducting certain activities and does not involve teaching substantive claims about or within these activities.[15] W. D. Hudson writes that religious education "initiates into a certain form of belief, whereas religious indoctrination iniates into a certain *content* of belief."[16] One can find similarly made points by R. M. Hare, Patricia Smart, John Wilson and R. G. Woods. The popularity of this position explains in part why subjects such as mathematics and formal logic are said to be fairly safe when it comes to danger of indoctrination; it is widely held that these fields prescribe ways of thinking but not any particular beliefs.

The third epistemic approach in this literature is appeal to whatever tools are offered by the best theories relevant to the belief in question. Not facts alone or methodologies alone, but also models, assumptions, presuppositions, and systems of these and other tools are used. This is probably the approach implied by Brian Crittenden's account of indoctrination which puts the burden of justification on "intelligent inquiry" which he says is not an appeal to "some kind of arid rationalism." Crittenden calls his account a "content-in-context" approach, requiring a look at fairly large "chunks" of inquiry and what role they play in a "general 'view' of life."[17] Thomas Green is equally reluctant to depend upon specific facets of inquiry, such as methodology or facts. He enjoins us to examine the merits of "enabling beliefs" and presuppositions, and says at times "there is only the most tenuous line between the fanatic and men of less singular devotion."[18] As close as these philosophers, and some of their colleagues, come to the edge of the great divide, they remain on Siegel's side most of the time.

The "transcendental justification" popularized by Paul Hirst and R. S. Peters belongs primarily in the second, methodology, category. This approach is linked solidly with the Hirstian "forms of knowledge" and with a depiction of what is said to be rational mind and rationality (interchangeably treated, which is noteworthy in the context of this discussion). At times this justification treads into areas of substantive inquiry, but at these times it does not approach the territory staked out by Halstead.[19]

So much for the view from Siegel's side of the chasm. To take a look at indoctrination from Halstead's side, we might put together a view of indoctrination from the work of educational theorists who lean heavily on the work of any of the genetic epistemologists from Baldwin to Vygotsky and Piaget to Kohlberg. We might turn to theorists working within Marxist traditions, or neo-Marxist traditions such as Critical Theory. Dewey's perspective provides the best example, however, because it is most consistently positioned on Halstead's side of the divide.

Freedom, and its essential correlates which involve capacities for self-determination and independent thought, are highly valued by the analytic philosophers. They realize these ideals can be reduced to a mockery through indoctrination, and also through abandonment of the educational responsibilities accompanying the essentially social nature of personality and mind. Harboring similiar values and also being aware of the need to walk a line between indoctrination and neglect of educational responsibilities, Dewey must reflect in his writing concerns about indoctrination which will parallel those of the philosophers working within the analytic tradition. Yet, the aspects of Dewey's work which could be related to issues of indoctrination do not fall within a cleanly delineated domain parallel to the domain of belief in the analytic philosophers' work. The plausibility of the arguments for restricting indoctrination to the domain of belief depend upon a propositionalism which is absent in Dewey's theoretical stance. In *How We Think*, for example, Dewey sets out a view of the "logical form" of reporting actual inquiry which renders that logical form useful in some circumstances but nevertheless importantly derivative from the actual process of inquiry. According to Dewey, we use propositional representations of thought to study thought and to engage in thought, as groups and as individuals; but these representations are not thought.[20] In *Logic: The Theory of Inquiry* Dewey treats in more detail this view of propositions, their components, and the logical connectives which relate one to the other, as derivative from actual inquiry. A name or any other referring term "is a part of *language* only in virtue of its *operational* force; that is, as it functions as a means of evoking different activities performed by different persons so as to produce consequences that are shared by all the participants in the conjoint undertaking." Even the truths of formal logic are said to "rest upon analysis of the best methods of inquiry," and to be subject to improvement along with the sciences. Formal relations and hypothetical universals are important for inquiry, but they *can* be important only by virtue of the material and social conditions under which such "application" occurs.[21]

Without the propositionalism which made the focus on beliefs plausible, Dewey's inclination toward the much broader and complicated notion of *in-*

quiry is reasonable. *Inquiry* is indeed a complex idea in Dewey's work. It is significantly different when conducted by an individual, as when a person engages in thinking, and when it is conducted by a group, as when a research team works in a cooperative fashion. These are different processes, even though they can both be represented by similar looking propositional systems. When an individual inquires according to a theory, and when a group does likewise, they are nonetheless doing different things and subject to different aspects of the situational context. For example, the nature of a group's inquiry can be altered by difficulties in interpersonal communication, but individual inquiry cannot be similarly affected. On the other hand perceptual prejudice may handicap an individual in ways which can be overcome in group inquiry by double-blind experimental design. Obviously, these different processes cannot be understood apart from one another because they inevitably criss-cross as individuals think in groups and as groups fund symbols and produce books with which individuals think. The point here for this discussion is that even though inquiry or rationality or thinking can be made to look relatively simple by representing all of it with a single propositional system, for Dewey that system can only be understood insofar as the *context* of inquiry is understood, and that context will take on many dimensions as inquiry *actually* proceeds.

Just consider for a moment the individual side of inquiry, or "reflective thought," as it is called in *How We Think*. It involves the past experiences of others as represented in their books and language, the experiences of contemporaries with whom the thinking person socializes, activities in the environment and manipulation of the environment, previous learning, the thinking individual's goals, the individual's felt problems, the individual's perceptions, and other similar factors.[22] Justification of and within this complex domain of activity is going to be much more complex than justification of isolated claims. It will not possess the crisp finality achievable in the previous conceptualization of indoctrination, but it will have a closer prima facie relationship with cases such as that of the Catholic parents striving to produce devout Catholic children. Whether its relationship to such cases is finally judged superior or inferior to that of the shaping of belief approach will turn to some extent on the defensibility of propositionalism, one of the central issues between Siegel and Halstead.

Inquiry, as set out by Dewey, is much closer to what those on Siegel's side of the divide would call coming to know rather than knowing, or coming to believe rather than believing. In short, from Siegel's side the idea of inquiry appears to suffer from confusion of psychological senses of thinking with epistemological senses of thinking. From Halstead's side, however, these are not necessarily confusions at all. They are a potentially desirable fusion of context of discovery and context of justification, of psychology (as well as descriptive and normative social theory) with epistemology. Dewey's arguments for the necessity of just such a fusion are well known. In several of his later books, Dewey argues against the desirability of "anchoring" epistemology in an "antecedent reality"; he argues against the three types of justification previously claimed to exhaust the epistemological positions in the analytic analyses of indoctrination. Inquiry should not be seen as "starting out" from bases antecedent to the process, such as facts, methodologies, or given theoretical stances. Dewey emphasizes the natural and conceptual connections between process and product, coming to know and knowing. The "continuum of inquiry" and "continuum of experience" are inescapable on his view. These are not continuums of propositional arguments; they are continuums of argu*ing*, inquir*ing*, and experienc*ing* composed in part of what Halstead has called the context of discovery. Discussing the "old" approach of epistemology, which Dewey claimed was shared by traditions as diverse as Idealism and Empiricism, as it contrasts with his "new" approach, Dewey writes:

> The old center was mind knowing by means of an equipment of powers complete within itself, and merely exercised upon an antecedent external material equally complete in itself. The new center is indefinite interactions taking place within a course of nature which is not fixed and complete, but which is capable of direction to new and different results through the mediation of intentional operations. Neither self nor world, neither soul nor nature (in the sense of something isolated and finished in its isolation) is the center, any more than either earth or sun is the absolute center of a single universal and necessary frame of reference.[23]

On this view of indoctrination, support of beliefs by reasons ultimately judged satisfactory because of their appeal to facts, to methods of reasoning, or to a currently valued theory, will not settle the issue. In the first place, we are not saddled with a question about only belief. And when it is belief which is in question, the legitimacy of that belief will depend upon its location in a continuum of experience and inquiry, and that location has a personal dimension as well as a socio-historical one.[24] What is required is a theory of experience, enabling us to locate beliefs and their accompanying goals, attitudes, and so forth in the life of an individual; and we require a theory of social interaction in order to locate the individual's experience as well as the social inquiry relevant to it in a continuum of social activity and historical process. These are precisely what we find Dewey calling for: for example, in *Experience and Education* he writes that issues of freedom and authority require a theory of experience, and in *Democracy and Education* we find such experience located within a view of proper social functioning. Indoctrination on this view takes us ultimately to the ideal of *growth* in individual experience, and the ideal of *community* in social interaction. Distinguishing education from indoctrination within Dewey's perspective necessarily and centrally involves these "process concepts" of growth and community. It is the way in which an individual's mind changes, and the way in which this process comes out of a proper set of social relations and contributes to their perpetuation, that must be understood.

Whether we find the analytic philosophers' view of indoctrination reasonably precise and free from confusion, or seriously deficient in its fidelity to the actual circumstances and cases which prompted our original concern about indoctrination, will depend to a large extent on whether we find the arguments of Siegel or Halstead most convincing. Whether we find the Deweyian account needlessly complex and filled with confusions between psychology and epistemology, or social theory and justification, will depend likewise. This is not to suggest that the associations among tenets peculiar to each side of this great divide and each of these views of indoctrination are associations of implication or logicality. However, Siegel's position and the arguments for it are an important part of the credibility of the analytic philosophers' view of indoctrination, and the same is true of Halstead's position, its defense, and the educational perspective of Dewey. Important educational consequences ride with each side of the debate in which Halstead and Siegel are taking part.

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1. Ian Gregory, "Review of *Indoctrination and Education* and *Concepts of Indoctrination*," *Philosophical Books* 14 (May 1973): 25-28.

2. This agreement is mentioned or discussed by a number of the authors of these analyses. See, for example, James Gribble, *Introduction to Philosophy of Education* (Boston: Allyn and Bacon, Inc. 1969), p. 30; John Kleinig, "Educating and Indoctrinating." *Concepts in Education*, eds. J.V. D'Cruz and P. J. Sheean (Melbourne: Mercy Teachers' College, 1973), pp. 28-29; and I. A. Snook, "Introduction," *Concepts of Indoctrination*, ed. I. A. Snook (London: Routledge & Kegan Paul, 1972), pp. 2-8.

3. Thomas F. Green, *The Activities of Teaching* (New York: McGraw-Hill Book Company, 1971), p. 32.

4. Brian S. Crittenden, "Indoctrination as Mis-education," *Concepts of Indoctrination*, ed. Snook, p. 145.

5. R. G. Woods and R. St. C. Barrow, *An Introduction to Philosophy of Education* (London: Methuen & Co., 1975), p. 65.

6. John Wilson, "Indoctrination and Freedom," *Concepts of Indoctrination*, ed. Snook, p. 103.

7. John Wilson, "Education and Rationality," *Aims in Education: The Philosophic Approach*, ed. T. H. B. Hollins (Manchester: Manchester University Press, 1964), p. 33.

8. John Wilson, "Indoctrination and Freedom" and "Indoctrination and Rationality," *Concepts of Indoctrination*, ed. Snook, pp. 17, 101.

9. See, for example, R. S. Peters, "The Education of the Emotions" and "Reason and Passion," and G. Pitcher, "Emotion," *Education and the Development of Reason*, eds. R. F. Dearden, P. H. Hirst, and R. S. Peters (London: Routledge & Kegan Paul, 1972); and John Wilson, *Education in Religion and the Emotions* (London: Heinemann, 1971).

10. I. A. Snook, "The Concept of Indoctrination," *Studies in Philosophy and Education* 7 (Fall 1970): 85.

11. Anthony Flew, "Indoctrination and Religion," *Concepts of Indoctrination*, ed. Snook, pp. 112-13.

12. Gribble, *Introduction*, pp. 33-34.

13. Hugo A. Meynell, "Moral Education and Indoctrination," *Journal of Moral Education* 4 (October, 1974): 19.

14. Patricia Smart, "The Concept of Indoctrination," *New Essays in the Philosophy of Education*, eds. Glen Langford and D. J. O'Connor (London: Routledge and Kegan Paul, 1973), p. 40.

15. Kurt Baier, "Indoctrination and Justification," *Educational Judgments*, ed. James F. Doyle (London: Routledge and Kegan Paul, 1973), pp. 87-89.

16. W. D. Hudson, "Is Religious Education Possible?" *New Essays*, eds. Langford and O'Connor, p. 191.

17. Crittenden, "Indoctrination As Mis-education," pp. 146-148.

18. Green, *Activities*, pp. 31, 50, 173192; and Thomas F. Green, "Indoctrination and Beliefs," *Concepts of Indoctrination*, ed. Snook, pp. 38-43.

19. The most comprehensive treatment of incompatibilities between the epistemologies of Hirst and of Halstead is found in Robert Earl Halstead, "Collective and Individual Understanding in Education" (Ph.D. diss., University of Illinois, 1978). Some of these incompatibilities are discernable in Robert E. Halstead, "Cognitive Structures and Forms of Knowledge," *Philosophy of Education 1977: Proceedings of the Thirty-third Annual Meeting of the Philosophy of Education Society* (Worcester, Massachusetts: Philosophy of Education Society, 1977): 203-214.

20. John Dewey, *How We Think* (Lexington, Massachusetts: D. C. Heath and Company, 1933), pp. 71-90.

21. John Dewey, *Logic: The Theory of Inquiry* (New York: Holt, Rinehart and Winston, 1938), pp. 14, 48, 375-378, 485-486.

22. Dewey, *How We Think*, pp. 99-118.

23. John Dewey, *The Quest for Certainty* (New York: G. P. Putnam's Sons, 1929), pp. 290-291. Related arguments and comments can be found, for example, in Dewey, *Quest*, pp. 109-110, 122-123, 170-183, 195-198; John Dewey, *Experience and Nature* (La Salle, Illinois: Open Court, 1929), pp. 265-266; and Dewey, *Logic*, pp. 53-54, 113-114, 223-226, 241-242, 273-280. One of the best summaries and analyses of these and other epistemological aspects of Dewey's work is Georges Dicker, *Dewey's Theory of Knowing* (Philadelphia: Philosophical Monographs, 1976).

24. For one attempt to set out the Deweyian distinction between personal and collective justification, see Ralph C. Page, "Reasonable Beliefs and Personal Points of View," *Philosophy of Education 1977: Proceedings of the Thirty-third Annual Meeting of the Philosophy of Education Society* (Worcester, Massachusetts: Philosophy of Education Society, 1977): 257-267. For a much more detailed treatment of the personal and collective justification distinction which is less tightly connected to particular Deweyian tenets and concerns, see Halstead, "Collective and Individual Understanding."

OPEN EDUCATION AND OPEN MARRIAGE

Peter Goldstone
Temple University

Although the peak of public attention to theories of open education and open marriage may have been reached,[1] we do not serve ourselves well by relegating them to the status of "just another fad." Faddish they are, but such an assessment neither explains what makes their popularity possible, nor what contributes to their being popular at a particular time and to particular groups of people. The truth of the matter is that we lack any deep understanding of what is really at stake in these theories. If, at the same time, the justifying frameworks and concepts of these theories resonate sympathetically within us, then the failure to see into these theories is also a failure to understand ourselves. The kind of self-understanding that can be gained from the attempt to get inside a theorist's vision may presently be running a distant second to E.S.T., but it is at least not a fad.

The unsatisfactory state of our understanding of the open theories may also be brought out by noting that much of their current acceptance or rejection is premised on what research tells us about whether they work. If experiments in open education fail to increase scores on standardized examinations, and if attempts at open marriage result in divorce, then for many, such results are definitive.[2] This sort of approach clearly does nothing to enhance our understanding of these theories. We may remain convinced of their desirability but despair regarding their feasibility. The focus on empirical evaluation also overlooks the possibility that a more searching investigation might reveal that the open theories have a distinctive view on what it is for education or marriage to work. If this is the case, then the choice between the open theories and their opposition looks less like a decision about which of two tools will do a given job better and more like a confrontation of incommensurables. In such a situation, not only will empirical studies fail to provide us with guidance, but doubts may be raised as to the very possibility of our providing rationally compelling arguments.

I will be concerned with *theories* of open education and open marriage and not directly with their embodiments in practice. The term "theories" is partly honorific; no doubt the loose amalgam of partisan advocacy, citation of anecdotes and passing reference to theoretical underpinnings that permeates much of the writing on these subjects does not much resemble a scholar's idea of what a theory of any sort should look like. There is, however, more here than meets the eye, and the advocates of open arrangements see with varying degrees of clarity that there are theoretical formulations that can be brought forward to support their advocacy.

This paper will involve no effort to provide anything so ambitious as a definition of the open arrangements, nor will it eventuate in a fully worked out account of these theories. What it is intended to do is to reveal some of the ideas to which the open theories and their proponents are hostage. It is thus hoped that we will begin to see both more of what is at stake and what it is about the theories that grabs us.

I will proceed by drawing a series of parallels between open education and open marriage which are intended to be mutually enlightening. At the same time the fact that these parallels can be drawn should lead us to suspect that broad social and intellectual currents may be operative and to investigate whether the appeal of the open theories is not tied to conceptions and convictions that both have a history and are well entrenched in our culture.

I. OPEN EDUCATION AND OPEN MARRIAGE ARE NORMATIVE STRUCTURES

Let us begin with a simple ground-clearing observation, namely that it is not possible to understand either of the open situations solely in terms of the behaviors that are practiced in them.[3] It will not do to say that an open classroom is one in which the students are moving about, talking freely to one another and engaging in educational activities as they are inclined. This will not do because the description might also refer to a so-called traditional classroom in which the teacher was unable to maintain order. It is not simply the behaviors mentioned which make a classroom "open" but the fact that these behaviors are at least permitted, probably encouraged and possibly required. It is a question of what *norms* or rules, if you like, are in force.

In a parallel way, the fact that partners in a marriage have other sex friends outside of the marriage, that they have a variety of interests not pursued by their mate, and that they engage in extra-marital sexual relationships does not necessitate the conclusion that their marriage is open. It might in fact be a traditional marriage which is not working or in which the partners are "cheating." Open marriage is no more a set of behaviors than is open education. What makes a marriage an open marriage is the existence of norms to the effect that certain behavior, e.g., external sexual relationships, are either permitted or encouraged.

There is a further insight to be derived from this parallel. If we will attend to the point about cheating, we will notice that both of the open theories say that what are in the traditional arrangements called "cheating" are in reality something else, perhaps helping one's classmate or sharing one's love. This point may be taken in the following way: in traditional classrooms and marriages, students and spouses act from motives of benevolence to reach out to and share with others, but in the traditional arrangements they are either prevented from acting on such motives or punished for doing so. Without the norms prohibiting these, it would be both impossible to cheat and possible to act humanely. The substitution of norms of permission or encouragement for those which forbid is thus called for. We may observe that, as a consequence, in a world characterized by the norms of open marriage, that it would be *impossible* to commit adultery. Such a world would not be inhabitated, at least along this dimension, by either saints or sinners. We might ask, "In what ways would we act, feel and think differently in such a world?" For example, what added kind of effort would be needed to understand Shakespeare's plays, or what kinds of logistical arrangements would accompany the new psychology and morality (in the absence of the possibility of guilt, would motel business decline?) These are some of the things that are at stake in a world which may be alternatively thought of as 'liberated' from constraints upon humane conduct or "impoverished" by the disappearance of the possibility of moral conduct.[4]

The open educator's critique of educational practice rarely goes so far as to call for the abolition of the possibility of cheating. There is, however, an important strain of thought in open education which is highly critical of the *competitive* character of many of our current schooling practices. Many open education advocates seek to greatly reduce if not to eliminate the competitive aspects of schooling. Here it will be helpful to observe that standard accounts of the development of self identity, e.g., those of Erickson and Friendenberg,[5] stress the importance of competition in the development of identity. On such views I come to esteem myself by being esteemed by others for doing well or better than most at some public activity that others prize. Do open educators want a reduction of competition and yet wish for students to develop strong identities? The answer, I think is "Yes" and we can also see that open educators can consistently hold both of these positions by having a different view either of what self-identity is or how it is to be achieved. Though this difficulty is not, to my knowledge, dealt with explicitly in the open education literature, we can speculate that both the technologists criterion-referenced testing and the neo-humanists "Do your *own* thing" may be part of an attempt to say what self-identity or respect looks like in non-traditional terms. Here, also, fundamental changes in Human character and Social relations may be involved. While this subject needs sustained attention, enough has been said, to indicate that the emphasis on understanding the norm structure of the open theories is a promising one.

II. BOTH OF THE OPEN THEORIES ENGENDER CONCEPTUAL *STRAINS*

The point to be observed here is that discussion of the open theories sometimes takes the form of asking, "How can we say this is marriage?" or "But I don't understand this to be teaching at all." Of course, such questions can be construed as trivially verbal; one might respond with, "What's in a word? Whether they are usefully construed as teaching or marriage is academic, what's important is whether they help, educationally and personally." This response is not unintelligent, but it may be that the original form in which the questions were put ("Is this marriage/teaching?") provides us with a better entry point into what is important. The norm changes suggested in the open arrangements appear to remove fundamental features of their respective activities, and it may be thought that the norms are embodiments of the point or purpose of these activities. Thus to remove or replace fundamental norms will be to challenge the very point of these activities. In the case of open marriage, this may be seen by reflecting that while marriage may be understood as a merely *legal* act, that such an understanding neglects important social factors which enter into the concept of marriage. To get married involves making a commitment to the perpetuation of the union. No doubt this does not mean perpetuation under *any* circumstances, but it does involve a strong commitment whose presence is not clearly evident in the open marriage literature. The strong emphasis on personal self-development and on arrangements existing in order to give us what we want, give rise to questions about what it would be to fail to live up to one's commitments in an open marriage.

The conception of the teacher as facilitator which is central to open education literature might be judged to be seriously out of kilter with fundamental educational purposes such as the transmission of knowledge or culture or education as initiation into the forms of civilized life, or even education as the cultivation of certain kinds of disposition. On all of these conceptions, the teacher's role apparently goes beyond that of facilitator to guide or leader or initiator.

Now the advocates of the open arrangements call their arrangements open *education* and open *marriage*, and neither are these claims trivially verbal. For the open theorists devote themselves to arguing that *they* are the defenders of marriage and education, that the fundamental human purposes of these institutions are poorly served by the traditional arrangements and that their own proposals would be more satisfactory for achieving these purposes. It is not my purpose to decide between the combatants; I do wish, however, to suggest that the conceptual strains engendered by the open theories raise questions about whether the open theories are to be construed as challenging the purposes of our educational and marital practices, or whether they may be seen as attempts to formulate new means to the same purposes. We will have to consider the extent to which it is possible for the point or purpose of an activity to float free of the norms which embody it. It should not be surprising that the logic of these disputes between the open theorists and their opponents resembles many earlier disputes, the paradigm being that between the Pharisees and the Saducees.

III. THE OPEN THEORIES DEFINE AND CRITICIZE THEIR OPPOSITION IN SIMILAR WAYS

In both open marriage and open education the major opposition is called by the same name, *traditional* education and marriage. Both of these are accused of many of the same faults, of being authoritarian (non-egalitarian), restrictive of individual freedom, psychologically destructive and of ignoring the present, usually for a golden-aged past. There is even, in the open theories, a common ambivalence about whether the traditional forms were right in their times, a necessary evil in their times, or always destructive.

An important question that I have not seen discussed is whether the attack on traditional education and marriage is at the same time an attack on particular or perhaps *all* traditions. Definitions of traditional education and marriage are almost always set out in the form of a list of features or norms (e.g., students sit in rows facing the teacher, husbands work, wives don't) and no reference is made to traditions in the exposition. Thus, traditional education is not much thought of as being education in or initiation into social, cultural, religious or intellectual traditions. Despite the silence of the open theories on this subject it is not implausible to enlist them as entrants in the tradition (to be read, practice) of using the words "tradition" and "traditional" to denigrate their opposition. Here we will want to ask, "Is it just a particular set of marital/educational arrangements that are being called into question, or beliefs and concepts central to a world view(s) identified as traditional?" That it is the latter is in evidence when the O'Neill's in *Open Marriage* criticize the view that to be un-married is to be incomplete. Open educators are against particular educational arrangements and practices because they support a view of the child as an empty container or evil or because they regard children's spontaneity and creativity with suspicion. Thinking of open marriage/education as involving attacks on particular or even all traditions will lead us to ask challenging questions. We will need to understand what traditions are, and we will need to ask whether different conceptions of childhood or marital life may be assessed rationally or empirically.

IV. THE HIDDEN CONTRACT/CURRICULUM ARGUMENT

One important element of the critique made by both of the open theories is that the traditional arrangements contain a kind of hidden and pernicious agenda. Open educators frequently claim that the "real" curriculum of compulsory schooling is not found in the content of subjects but in the forms and practices of schooling which instill dispositions of docility, passivity and competition. The form of schooling or the hidden curriculum works to make children's school experiences miseducative. In a parallel way, open marriage advocates claim that the hidden social clauses of the marriage contract such as what they call the "togetherness clause" work to inhibit the personal growth of the individual partners. Frustrated at their inability to grow, and ignorant of the hidden clauses which stifle them, the partners turn their rage upon one another with resultant unhappiness and divorce.

Now an examination of these hidden agenda arguments may be helpful in revealing something of the theoretical commitments of the open theorists. We should consider what it is that upsets the open theorists; is it the fact that the curriculum/clauses are *hidden* that is the object of their critique or is it the particular *content* of the curriculum/clauses? If it is the hiddenness that is pernicious, then is it supposed that it is both possible and desirable for the school curriculum and the norms of marriage to be made entirely explicit? The endorsement of the construction of marital and educational *contracts* would support the idea that the open theorists do find it both possible and desirable that what is hidden be made explicit. If these norms were made explicit, the open theorists think, then people would be free to reject them. Of course, if people were quite free to reject them, it would not be clear that they were any longer normative, that is, that there was any presumptive or binding force connected to them. This line of thought leads to the suggestion that the real source of the objection on the part of the open theorists is that the contract clauses have a binding force independent of individuals' personal acceptance of them. This aspect, we should notice, holds whether the norms are hidden or made explicit. If it is replied that making norms explicit would at least give people a choice of whether they should accept a set of institutional arrangements, the response may be made that it is impossible for us to avoid a good many social activities, the foremost of which is the use of our native language. We are forced to wonder if the open theorists are prepared to object to the "hidden grammar" of our language, and if they would urge that alternative grammars be set before the fledgling language user. What, we must ask, would such a choice look like?

If, on the other hand, it is the *content* and not the hidden character of the hidden curriculum/clauses that offend the open theorists, then it is important to observe that the descriptions of the content of the open agendas favored by the open theorists are not the same descriptions that would be preferred by those seeking to defend the non-open arrangements. This ought to suggest that the open theorists do not see "brute facts" to which others have heretofore been blind. Rather, the differences between the contending parties might be explained by the suggestion that the description to which a party gives favored status is already prejudged by a commitment to an ideological position.

This point may be made convincingly by exhibiting how the exact argumentative moves made in describing the traditional arrangements may be employed to describe the "hidden clauses" of the arrangements preferred by the open theories. In this vein, a hostile traditionalist might observe that the highly vaunted spatial rearrangements of the open classroom were expressive of open educators' commitment to teaching the children the hidden curriculum with the message that "no place (or, any place) is home." The reliance upon educational and marital contracts has been claimed to be indicative of an absence of relations of trust and mutual commitment; "get it in writing" is usually counsel reserved for those occasions on which we think it likely that it will be necessary to *hold* someone to their word. Nor is it difficult to imagine how the critique continues; for example, the recent work of Christopher Lasch[6] and Fred Hirsh[7] suggests that the neohumanist attack on the speciality of relationships (*my* wife, *my* teacher) seeks to enforce the norms appropriate to relationships with strangers upon our intimate connections. This, it could be said, is the hidden agenda of the seemingly innocuous principle of "respect for persons."

Now, my interest here is to investigate the character of "hidden agenda" arguments and to inquire whether much of their force does not depend upon the belief that particular claims convey correct description of a state of affairs, a description that no one with their eyes open could deny. I suggest that the considerations that I have put forward raise doubts about the quick acceptance of this view, and force us to ask if there really is some neutral place to stand in analyzing the content of the hidden agendas of social and educational arrangements. That there is no neutral ground is suggested by Alisdair McIntyre when he says:

> We cannot expect to find in our society a single set of moral concepts, a shared interpretation of the vocabulary. Conceptual conflict is endemic in our situation, because of the depth of our moral conflicts. Each of us therefore has to choose both with whom we wish to be morally bound and by what ends, rules, and virtues we wish to be bound.... I must choose between alternative forms of moral and social practice.[8]

V. THE OPEN THEORIES AND THE PROLIFERATION OF ALTERNATIVES

Open education and open marriage are each but one of the many *alternatives* that have been advocated and sometimes practiced in recent times. Open marriage takes its place along with living together, trial marriage, short-term contract marriage, group marriage and mate swapping as alternatives to traditional marriage, and open education fits somewhere among the likes of free schools, de-schooling, alternative schools, affective and humanistic education. Though the conflicts between the proponents of the alternatives can get heated, still there is wide agreement on much of the critique of traditional education/marriage, and even their disagreements seem to be mostly about the proper embodiment or means of achieving personal and social ideals shared by the alternativists. The existence of numerous alternatives which are recognizably close in their fundamental conceptions to those of the open theories supports the contention that the open theorists appeal to convictions that are the possession of more than a lunatic fringe. Open marriage then, is within the bounds of "what can be said" not merely in the sense of being intelligible, but in terms of being taken seriously.

While the open education/marriage theorists may quarrel with their close relatives, they all think that it is a good thing that alternatives proliferate. In this agreement is revealed a common vision of society and interconnected strands of ideas of human life. None of the alternatives sees itself as one among several that are competing to be accepted as the one form of marriage/education which will be enforced upon everyone; that is, they do not see themselves replacing the traditional arrangement as what is to be imposed upon all. Rather, they see themselves in one of two ways:

(a) The various alternatives should all be allowed to compete in a free market with people or partners choosing them as they suit their peculiarities. This formulation carries with it the idea that no one alternative is superior to others on other than an individual basis but that a given alternative will suit particular individuals, dyads, etc.

(b) The various alternatives should be allowed to compete in a free market, but some of them are actually preferable for at least most people on an objective basis.

The O'Neills seem to vacillate between (a) and (b), sometimes thinking that they can make human nature arguments about the desirability of open marriage for everyone, while at other times the O'Neills talk as if open marriage particularly suits some people and not others. The theorists of open education vacillate in the same manner. Both (a) and (b) might allow that traditional education/marriage could be among the alternatives open to people/dyads but (a) might allow that the traditional types would actually suit some (undamaged?) people/dyads. The O'Neills never seem to rule out the possibility that a couple would make a contract for a traditional marriage, though when (as they are most frequently) urging formulations of type (b) they would say that a couple would have to be sorely uninformed to choose a closed marriage. Another strain that is not emphasized but nonetheless present in *Open Marriage* is that it is making a choice and not particularly the content that is important. As long as a couple really agreed to a closed marriage that would be fine for them, because they would have *chosen* it (somehow it becomes different through being chosen). This autonomous ideal sits uneasily with the higher self ideal, "Our nature is to grow, and we choose to realize that in a constricting situation." This may not bother the O'Neills because they may think that in a genuine choice situation no one would really choose marriage of the traditional variety, but the theoretical question remains, is the *ideal* personal growth, or is it free choice? Free choice of personal growth or a road to personal growth may be what the O'Neills have in mind, though the contracts might vary they no doubt imagine them as varying within limits, but it does not resolve the question. Perhaps the O'Neills would claim that without free choice personal growth is impossible. This would enlist them on J. S. Mill's side in a dispute with Plato, but the issues can hardly be decided here.

Having identified the social and personal visions or family of visions that underlie the celebration of alternatives, we should note that the idiosyncratic visions and possibly the autonomist ones seem to fit neatly with one central strand of liberal social thought traceable at least to J. S. Mill's *On Liberty*[9] in which he argues for the necessity of the existence of a variety of experiments in living. On the one hand, Mill takes the idiosyncratic view that different life styles suit different people. Mill even anticipates the analogy employed by the O'Neills, that of picking clothing that fits one's physiognomy. Mill, however, also employs typical laissez-faire arguments to the effect that the choice of life styles by individuals will work for the good of all by demonstrating the benefits and defects of the various experiments. He here evidences a concern for the social good that I have not seen in the open theorists.

The endorsement of a proliferation of alternatives is part of a vision of society which makes sense only against a background of certain conceptions of human individuality and ideals of human life. An emphasis on the connection of happiness with autonomous choice will support the alternativist vision, as will a view of individuals as idiosyncratically scripted with lives to be realized or expressed. Classical or religious views of human nature might allow some variety of lives to be led but they can not be expected to look in a friendly manner upon experimental lives; and while religious views, for example, might grant that each of us is here for a purpose, they would also maintain that the purposes are interconnected and attached in a non-accidental and limiting way to collective purposes. To the extent that the open theorists have a human nature view, it is considerably more democratic in terms of what it will admit and is employed mostly in the criticism of the traditional arrangements. The positive views of the open-theorists focus more on autonomy or on our distinctive individual self which it is our business to realize. To make explicit the Millian view of the ideal nature and purpose of social arrangements and its attendant conceptions of human individuality is to account for some of the persuasiveness of the open theories. The belief that social arrangements are made for men and not vice versa is a cardinal tenet of liberal thought; and the conviction that the highest ideal for education and life in general is the achieving of self realization or self development, goes largely unchallenged. It should not be surprising that social and educational theories which claim to promote these ideals can with plausibility claim to be affirming and not subverting purposes which are deeply embedded in our thought about educational and personal ideals, and the social arrangements that promote those ideals.

CONCLUDING REMARKS

The parallels between the open theories that I have brought out do not "an interpretation make." They certainly are not organized here into a coherent framework and they are not explored individually in very great depth. The parallels however, and the fact that they can be drawn, point us in the direction of liberal social theory. Part of the explanation of the attractiveness of the open theories has been shown to consist in the fact that they are rooted in social and political conceptions that have been a dominant ideology in the liberal democratic tradition since at least the time of John Stuart Mill. That liberal theories are indeed part of the intellectual ground of the open theories is supported by the one point on which commentators on the open theories have agreed. The commentators[10] have noted the supreme importance of individualism and individuality in the open theories as these are reflected in the atomized individualization of open education's pedagogy and in the central role of conceptions of growth and self-realization in both of the open theories. Indeed, it might be noted that in both open education and marriage the only social groupings that are encouraged are *voluntary* ones; in contrast to Dewey's pedagogy, the students in an open classroom come together only when it is mutually in their interest, and marriages that are not growth-promoting are to be recontracted or junked. To say that the open theories are individualistic however, is more to set a problem than to solve one, for individualist theory itself is a tangled skein of ideas which involve both different conceptions of the self and differing ideals of individual development.[11] The individualism of the open theories, grounded in the "third force" psychologies of Carl Rogers and Abraham Maslow, is not itself found in classical liberal social theory. The connection of these neo-humanistic psychologies with older ideals of individuality remains to be explored as does the fit of the Maslow-Rogers brand of self-realization with classical liberal social thought.

The central place of these self-realizationist psychologies and their attendant affective emphasis, provides the basis for a final observation, which can only be sketchily developed here. I remarked earlier that much of the current disenchantment with the open theories rests on a conviction that the world as it is presently constituted will be hostile to the theories and their products. "What will happen", we ask, "to openly educated youngsters when they have to face harsh reality" and "however desirable it might be to remove sexual jealousy, it turns out that we are not ready." This, then, is the received wisdom about the open theories. It is, in a phrase I borrow from my colleague Leonard Waks, "exactly wrong." There is good reason to believe that the central ideals and conceptions of the open theories are anything but utopian, and that they are in fact pervasive if not dominant in contemporary American society. It may be that our liberal inheritance is not an unfinished dream calling for completion but a stark reality. Moreover, recent studies of shifts in the employment market have indicated that the largest number of people were employed in what economists call third (service) and fourth sector (intangibles) occupations and:

> It is expected that those methods of social organization which characterize the service industries will find their counterparts in the socialization settings of the school as well. For instance, observers believe that only secondary industry requires the high levels of differentiation and specialization and interdependence which characterize them to function optimally...school systems which are charged with the responsibility of developing "human capital" are faced with a duty to find and develop progressively smaller numbers of children with secondary industry skills and increasing numbers of individuals with service relevant skills, and to modify its classroom organization and curriculum appropriately...the spread of affective curricula is an example in this regard.[12]

The direction of these remarks indicates that the open theories not only appeal to our liberal sentiments but that their arrangements and affective emphasis instantiate the most up to date version of Bowles and Gintis' correspondence principle.[13]

The arguments of this paper have dealt in a preliminary way with unexplored issues related to the open theories. I have sought to elicit something of what is at stake in our deliberations about them, and I have raised questions about the logical character of those deliberations. I have attempted to say something about their attractiveness for us, and have speculated about why they emerged when they did. *Much* remains to be done, we may hope that discussion of the open theories will not be peremptorily closed.[14]

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1. As I shall remark in the text, the greatest amount of literature on these topics is found in non or quasi-academic contexts. I have followed George O'Neill and Nena O'Neill's *Open Marriage* (New York: Avon, 1972) as the "classic" text of the open marriage field, with some attention to the O'Neills' second effort in this genre, *Shifting Gears* (New York: Avon, 1972). Charles Silberman's Open Classroom Reader (New York: Vintage, 1973) and the selections edited by Nyquist and Hawes as *Open Education* (New York: Bantam, 1972) are widely cited by open education advocates as providing the theoretical foundation for their advocacy. I have relied on these texts and Herbert Kohl's *Open Classroom* (New York: Random House, 1970) for a base in thinking about open education.

2. A useful review of studies challenging the ability of open education to increase scores on standardized tests is in Christopher Hurn *The Limits and Possibilities of Schooling* (Boston: Allyn and Bacon, 1978). See also Robert Rimmer's "Why Open Marriage Doesn't Work" in the February, 1978 *Forum*, pp. 17-20.

3. This point is taken from Professor Donald Tunnell's contribution to *The Philosophy of Open Education*, ed. David Nyberg (Boston: Routledge and Kegan Paul, 1975).

4. While the "liberated" view is widely known, the "impoverished" view is not. For a development of this position, and the assertion that the norms of open marriage would "flatten out" our experience see Margot Hentoff's "In Defense of Misery," *New York Review*, 1973.

5. See Erik Erikson, "Identity and the Life Cycle," *Psychological Issues*, Vol. 1, 1959, and Edgar Friedenberg, The Vanishing Adolescent (New York: Dell, 1959).

The connection of competition and the development of self respect is also drawn in John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971) and Robert Nozick's *Anarchy, State and Utopia* (New York: Basic Books, 1974).

6. Christopher Lasch, Haven in a Heartless World (New York: Basic Books, 1977).

7. Fred Hirsch, *The Social Limits to Growth* (Cambridge: Harvard U. Press, 1976).

8. Alisdair Macintyre, *A Short History of Ethics*, (New York: Macmillan, 1966), p. 268.

9. John Stuart Mill, *On Liberty*, (New York: Appleton Century Crafts, 1947), Chapter 3.

10. A leading example is the series of articles by Joseph Featherstone in *The New Republic* some of which are reprinted in Silberman, op. cit. and Nyquist and Hawes, op. cit.

11. For an excellent start at untangling individualist theory see Steven Lukes *Individualism* (New York: Harper and Row, 1973).

12. Rosalie Cohen "School Reorganization and Learning: An approach to assessing the Direction of School Change" in *Learning and Culture*, Kimball and Burnette, eds. (Seattle: U. of Washington Press, 1972).

13. Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America*, (New York: Basic Books, 1976).

14. Conversations with Richard Angelo have been helpful and, I think influential. Earlier versions were read at Temple University's G. (P.) G. E. Symposium (1976) and at the 1978 meetings of the American Educational Studies Association in a symposium with Lanny Beyer and Ernest Kahane.

RESPONSE TO GOLDSTONE

William Hare
Dalhousie University

It would be ungenerous not to acknowledge at the outset that Goldstone's paper is exploratory in nature. He has drawn out for us in most interesting detail certain parallels between two sets of ideas not usually compared and contrasted with each other in order to uncover aspects which might prove mutually illuminating. His conclusions are tentative rather than definitive, typically offered as suggestions which might repay further careful consideration. He has, to borrow a phrase, commended the subject to us. Recognizing then that his views are often, as he himself puts it, preliminary, I intend nevertheless to concentrate on some of his more cryptic comments. If I understand these correctly, they involve views which are not only false but likely to encourage certain fashionable but regrettable tendencies in contemporary educational theory.

One further preliminary comment. Having introduced the term "fashionable," let me hasten to add that Goldstone is surely right to insist that it would be a mistake to dismiss, what he terms, "open theories" on the grounds that they are faddish. Indeed, since the distinction between truth and popularity is both commonly overlooked[1] and even explicitly rejected, it would not have been amiss to have pointed out that there is not in general any logical implication from the currency of a view to any conclusion about its truth. Goldstone's own interest in the popularity of certain theories is, however, perfectly proper for a philosopher, for he is concerned in part to trace similarities with other theories which we also and independently find attractive.

1. Bringing Matters into the Open

i. At the end of Section 4, Goldstone leaves us with the thought that "the considerations that I have put forward... force us to ask if there really is some neutral place to stand in analyzing the content of the hidden agendas of social and educational arrangements." What are these considerations? Goldstone points out that "the descriptions of the content of the open agendas favored by the open theorists are not the same descriptions that would be preferred by those seeking to defend the non-open arrangements." He shows further that traditionalists might charge open theorists with having a hidden curriculum of their own, albeit with a different content. These examples, it is suggested, lend some support to the view that "the description to which a party gives favoured status is already prejudged by a set of beliefs or a commitment to an ideological position." As a result, we are urged not to accept too readily the view that particular claims convey a true or incorrect description of a state of affairs.

The first point to note is that none of this can have any tendency to suggest that *neutrality* is not possible in analysing the content of hidden agendas, for in any dispute between traditionalism and open theories it is always possible for one to remain on the side-lines. (Of course, the *disputants* are not neutral because they have taken opposing stands.) Thus, although Goldstone has introduced the concept of neutrality here, his accompanying comments indicate that his point is rather that there is not any unprejudiced, unbiased analysis available to us. But the facts which he produces to sustain this hypothesis, namely that each side *accuses* the other of having a hidden message to convey, are not adequate for the purpose. The making of an accusation cannot show that the accusation is warranted. Goldstone neglects his own sound advice not to accept too readily that a particular claim conveys a true or correct description. This is all too readily accepted if we allow the fact that X and Y charge each other with prejudice to lead us to conclude that we have a tussle of ideologies which precludes the possibility of rational assessment. Rather, when for example the traditionalist claims to have found the hidden message that "no place is home," we need to ask if indeed it is plausible to suggest that this is being conveyed. What *reason* is there to think that this is the intended but disguised lesson? What evidence is there that children are in fact learning this? Is there any evidence to suggest that teachers are taking steps to avoid what they declare to be unintended consequences? Goldstone has given us no reason to believe that the descriptions which emerge as answers to these inquiries must inevitably reflect a commitment to an ideological position. What his examples show is the *possibility* of unexamined biases entering into allegedly open education, but this does not imply that our attempts to avoid this possibility must be fruitless.

ii. In the same section on the "hidden curriculum/contract", Goldstone attempts at one point to show that it is not possible to bring what is hidden into the open. Thus people cannot be given the choice of deciding for themselves whether or not to accept something. Goldstone allows that if people could be brought to an awareness of the hidden contracts in, for example, traditional marriage, then they could in principle choose whether or not to enter into such an arrangement, or whether or not to support such an institution.

But, Goldstone maintains, such a situation of choice does not obtain in all areas, for some social activities, such as the use of language, *cannot* be avoided. What sense would it make to object to the "hidden grammar" of language and to offer a choice of grammars to the language learner?

To this we need to reply: first, that just as it is no objection to making matters more explicit than they are that they cannot be made "entirely explicit," so too the impossibility of choice in certain areas should not lead us to neglect the importance of choice where it is possible; second, while it is true that a choice of grammars cannot be given *in advance* of language acquisition since the choice can only be presented and understood in language, it does not follow that choice and reflection are *for ever* excluded. We need to try to ensure, as Hamlyn has recently put it "that the opportunity exists of coming back to review the initial beliefs or activities in a larger context"[2]; third, while the importance of creating an awareness of the myriad ways in which unexamined beliefs are embedded in our language must not be neglected, the practical problems here do not warrant the conclusion that a rational assessment is *in principle* impossible.[3]

2. Free-floating Concepts

Related sceptical ideas appear in earlier sections of the paper. Once we realize that we can ask what it is for education or marriage to work, then it is supposed to follow that doubts arise as to the very *possibility* of finding rationally compelling arguments. But why, we need to ask, should we confine the notion of rational assessment to issues which are straightforwardly empirical? As Goldstone himself brings out in section 2, we cannot just attach any meaning whatever to our concepts. All the same, towards the end of this section we find him wondering out loud how far it is possible "for the point or purpose of an activity to float free of the norms which embody it." It seems to me that this worry can be allayed by distinguishing between different sorts of norms, and different ways in which the point of an activity can be challenged.

When we have an on-going institution in society such as marriage, we may *introduce* certain restrictions to regulate it. For example, we may say that X must only marry someone of the same faith. Not being a member of the Roman Catholic Church was traditionally regarded by the Church as an impediment to any proposed marriage to a Catholic. In recent times, the Church has to some extent allowed the institution to "float free" of this norm even though, in one sense, removing the norm challenged the point of the institution. Surveys show, for example, that interfaith marriages are more likely to end in desertion, separation or divorce than marriages between partners of the same faith. What this shows, however, is that such marriages may be more difficult to sustain in practice. The difficulty is not to conceive of them *as marriages.* A conceptual problem would, I think, only arise in the context of such norms, if changes caused such enormous and insuperable practical difficulties that we could no longer take seriously those who claimed to pursue the purpose in question following such rules.

If, however, the norms in question are those which make the activity the activity which it is, i.e., the norms are necessary or constitutive features of the activity, then it is necessarily the case that an activity cannot float free of such norms *without ceasing to be the activity which it is.* Two points need to be noted here: (1) The fact that we may continue to use the same *term* after a constitutive rule has been removed can have no tendency to suggest that the same concept (or activity) exists, because a concept is not identified with the word we use but with the way in which we use the words whatever they may be. (2) If an activity (as reformed by the removal of a constitutive rule) is to be thought of as a *revised version* of an earlier activity, we would look for a good deal of overlap between the two activities.[4]

It is, of course, enormously difficult to state the necessary conditions for the concept of marriage as Richard Wasserstrom has recently shown.[5] It may be indeed that all we will find will be what Wittgenstein called that "complicated network of similarities overlapping and criss-crossing"[6] and which led him to speak of family resemblance. Still, unless the concept becomes empty, because it will exclude nothing, anything which is properly to be called a marriage must fall within this network.[7] We still have no warrant for toying with the idea of a free-floating concept.

Finally, on this point, it needs to be noted that although parallels between these two sets of open theories may be instructive, the fact, if it is one, that the concept of marriage cannot be analysed into a set of necessary and sufficient conditions gives us no reason in itself to believe that the concept of education is similarly elusive. The existence of parallels should not lead us to conclude that they are similar in every respect.

3. Empirical Assessment

Goldstone is right, I believe, in saying that we will not be able to assess X empirically *as* an example of open education if we have not appreciated the operative noms which make it an example of this. But this does not mean that we cannot find out what the consequences of X are before we identify X as an instance of open education, or before we assess the *merits* of the norms involved. Goldstone exaggerates, for example, when he claims, referring to standardized examinations and divorce statistics, that "this sort of approach clearly does nothing to enhance our understanding of these theories." Even if success in a standardized examination is not the *intended* outcome of the approach, the *fact* that such education does or does not have this effect can be instructive.[8] The important point to remember is that insofar as we neglect the norms, we run the risk of introducing irrelevant criteria for assesssment.

Certainly, we can agree that people may differ on whether or not a certain outcome constitutes success or failure. I would not have thought that this point was generally disputed.[9] It is, however, still worth insisting that we can in principle determine objectively *what* the outcomes are, for this will be crucial if we are ever to assess the different evaluations which people place on such outcomes.

4. *Changing Norms*

I must confess not to be unduly alarmed by the observation that "in a world characterised by the norms of open marriage...it would be impossible to commit adultery." Goldstone is attempting to draw out in this section certain possible consequences for moral education. But he has only produced a truism. Adultery will not be possible; but it *will* be possible to fall short of whatever norms replace the old ones, for example to be unwilling to universalize the new norm of "sharing one's love." *Moral* conduct will not have disappeared just because the *content* of our morality may have altered. What kind of effort would be needed to understand Shakespeare's plays? Flippantly, one might respond here, the same kind of effort now required to understand Sophocles.[10] More seriously, however, the point to be noted is that Goldstone has only identified a problem here if our understanding of morality is restricted to the particular content of the moral beliefs in our own society. If, however, we attempt to pass on something of the form of morality, then our *surprise* at the sorts of issues which once excited a person's sense of moral outrage will not make it impossible for us to understand that a moral issue is being treated.

5. *Choosing*

In the fifth and final section, Goldstone is concerned to located the open theories in a tradition of liberal social thought stemming from John Stuart Mill.[11] For Mill, at least, free choice is seen as more important than personal growth, for if people act so as to harm *themselves*, still "the decision ought to rest with those who are to abide the consequences."[12] A person's own good is not a justification for restricting his freedom. Perhaps Goldstone is correct in claiming that contemporary open-marriage theorists have not squarely faced the question of the relative claims of free choice versus personal growth. But what seems to me to be crucial here is that *both* of these ideals produce constraints in the context of *education* which contemporary open educators, unlike Mill and Dewey, seem extremely reluctant to acknowledge.[13] If our objection to certain traditional arrangements, such as marriage, is that they conflict with free choice and/or personal growth, then we need to ask if our proposed open-education arrangements are indeed fostering the development of people for whom such ideals are meaningful. And clearly, not every action and development can count as demonstrating *choice* and *growth*, for then why could not traditional patterns count? But when we read, for example, that "young people should have the right to control and direct their own learning, that is, to decide what they want to learn, and when, where, how, how much, how fast, and with what help they want to learn it,"[14] we can only wonder if it is simply being *assumed* that the conditions for the *exercise* of free choice are identical with the conditions for the *development* of the ability to make free choices; and further assumed that the granting of the former conditions will somehow guarantee development in a desirable direction, i.e., personal growth. In sum, Goldstone might have noted that since education is the process by means of which we come to be able to participate in other institutions in certain ways, the standards which we set for such participation necessarily influences what can be done in education.

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1. See my paper "The Concept of Innovation in Education," in *Educational Theory*, 28, 1, (winter, 1978), pp. 68-74, particularly section II.

2. D. W. Hamlyn, *Experience and the Growth of Understanding* (London: Routledge and Kegan Paul, 1978), p. 142.

3. Cf. Irving Thalberg, "Visceral Racism," *The Monist*. 56, 4, (October 1972), pp. 43-63.

4. Cf. Antony Flew, "Against Indoctrination," in *The Humanist Outlook*. 1968, pp. 79-97.

5. Richard Wasserstrom, "Is Adultery Immoral?" In *Today's Moral Problems*, ed. Richard Wasserstrom (New York: MacMillan Publishing Co., Inc., 1975), pp. 240-252.

6. L. Wittgenstein, *Philosophical Investigations* (Oxford: Blackwell, 1974), paras. 66-67.

7. Incidentally, no ordinary language analysis of "openness" is going to reveal whether or not a conceptual strain is engendered, for "open" can be used to suggest that many different sorts of restrictions are, or should be, removed, and we will need to look in detail at the *way* in which any "open theorist" is using the term. See my "Openness in Education," in M. J. Parsons (ed.) *Philosophy of Education 1974: Proceedings of the Thirtieth Annual Meeting*, pp. 218-226.

8. It should not be thought that, in my reference above to the statistical information on interfaith marriages, I am guilty of begging the question. These statistics apply to marriages which the partners *were trying* to sustain on a permanent basis. In one sense it is a *conceptual* truth that a divorce indicates that a marriage has failed, i.e., where "failed" means terminated. But this conceptual point could not show that the divorce indicated a failure in any sense which implied that the outcome was regrettable or objectionable.

9. It is, for example, clearly recognized by the author of the article on "Mixed Marriage" in the *New Catholic Encyclopaedia*, "to the extent that the rate of desertion, separation or divorce is a criterion."

10. Cf. *The Antigone*.

11. John Stuart Mill, *On Liberty*, ch. 3: "there should be different experiments of living;...free scope should be given to varieties of character, short of injury to others."

12. Op. cit., ch. 4.

13. Mill, for example, admitted that a woman enters a polygamous marriage as voluntarily as any other marriage. But immediately points out that the *teaching* she has received accounts for her willingness. He does not, of course, demand that such teaching cease, only that it be met by superior arguments if such can be found. See *On Liberty*, ch. 4. Dewey saw clearly that "some experiences are mis-educative. Any experience is mis-educative that has the effect of arresting or distorting the growth of further experience." See *Experience and Education*, (New York: Collier Books, 1963), p. 25.

14. John Holt, *Escape From Childhood* (New York: Ballantine Books, 1975), p. 186.

EQUAL EDUCATIONAL OPPORTUNITY: IDEAL OR IDEOLOGY

Nicholas C. Burbules and Ann L. Sherman
Stanford University

INTRODUCTION

In response to the criticism that the concept of "equal educational opportunity" is too vague, Max Rosenberg writes:

> The phrase 'equal educational opportunity' summarizes a good and proper dimension of democratic society. In our society the principle of equal educational opportunity should be as basic as the right to vote and freedom of speech. Equal educational opportunity will mean an end to all kinds of bias and discrimination in education, regardless of source or means or rationalization. It may be true that not all people can agree upon a precise definition of the phrase 'equal educational opportunity'. Yet it is a clearly recognized and widely approved concept and social objective. The phrase...is packed with meaning, value, validity, and authority.[1]

Unfortunately, Mr. Rosenberg has not deflected the accusation of vagueness; on the contrary, his statement is an archetype of the hopeful, but ambiguous, use of "equal educational opportunity" as an educational ***slogan.*** In fact, many authors have claimed that the principle of equal educational opportunity is no more than this: a slogan, a chimera, in short, an ideology.[2] In this paper, we address the accusation directly: is equal educational opportunity a worthy ideal, from which we deviate only by error or neglect, or is the principle mistaken in itself, at best misconceived and at worst a tool of ideological control and manipulation?

After a brief review of the principle and the most frequent interpretations of what it entails, we devote close attention to the six strongest criticisms of equal educational opportunity. The force of these criticisms, we believe, is to show that while the principle *in itself* is a worthy ideal, it is inadequate *by itself* to guarantee a decent education to every person; in other words, the principle constitutes a necessary, but not sufficient, basis for educational policy.

We conclude that it is reliance upon the principle as if it were sufficient which is usually criticized as ideological, conservative, or unjust; the principle cannot bear alone the normative weight which persons like Mr. Rosenberg wish to place upon it.

A SUMMARY OF INTERPRETATIONS

By "equal educational opportunity" we mean an "equal opportunity for education."[3] Phrased this way, the principle can be understood as a distributive principle, concerned with providing *access* to education. The use of "equal" in the phrase is potentially confusing, since it is sometimes used to mean "fair" and not, literally, "the same."[4] An "equal" (we would prefer to say "equitable") opportunity is, first of all, an opportunity for education and, second, an opportunity which is the same as for those persons who are relevantly the same, and fair, or appropriate, relative to those who are relevantly different under some definition of "relevance." The meaning of "opportunity" is especially important; in a paper read at this conference three years ago, Ralph Page called our attention to the "willing" requirement of an opportunity.[5] That is, an essential feature of an opportunity is that it can be ignored, or passed up; it is, we believe, a consequence of this view that equality of *results* cannot be the sole criterion of when opportunities are equal. To use a phrase coined by Robert Ennis, one evaluates equal educational opportunities from the standpoint of "prospective retrospection."[6] That is, one seeks to provide opportunities for education, through the design of rules of access and compensations, in such a way that, prospectively, one will be able to say, retrospectively, that equal opportunities obtained. In this respect, the principle of equal educational opportunity is a procedural, and not results-oriented, principle.

There are three dominant interpretations of what an equal educational opportunity entails: following common usage, we label these formalism, actualism, and equal results. *Formalism* uses the "equal" in "equal opportunity" literally; an equal educational opportunity exists when the conditions of access to education, for example, rules of admission, are *the same* for each person. Second, the formalist interpretation tends to place greater emphasis on characteristics of *merit* in the determination of relevant standards for distributing opportunities. Third, the formalist interpretation, in judging when an opportunity exists, tends to place a greater emphasis on the ability of persons to "make their own opportunities" through the exertion of effort; formalism places correspondingly less emphasis on the importance of making compensatory treatments available as part of the provision of an equal educational opportunity.

Actualism seeks to go beyond formal equality of opportunity by considering what barriers might *actually* restrict access. Actualism emphasizes the fact that "having an opportunity to do y" often requires that a person had a previous "opporutnity to do x"; for example, it is not fair, say actualists, to subject everyone to the same rules of admission for school if they have not all had the benefit of earlier opportunities to prepare them for such admission requirements. First, actualists tend to place a greater emphasis on *compensations*, in consideration of *need,*[7] where persons have not had such previous opportunities. Second, actualists tend to interpret the "equal" in "equal opportunity" to mean fitting or *fair*[8] opportunities, where alternative routes of access are designed with the actual difference between persons in mind. Third, actualists, while considering merit characteristics, place less emphasis on the ability of persons to "make their own opportunities," and more emphasis on the responsibility of institutions, like education, to provide compensations that will make the exercising of opportunities more likely.

As noted earlier, both formalism and actualism are procedural views; the provision of equal educational opportunities consists in the establishment of rules, compensations, and alternatives which have certain *expectable* results, whether or not persons in fact avail themselves of those opportunities. Actualists may take it as a failure of compensations and alternatives when persons do not take advantage of them, but insofar as persons were making their own choices this is not a failure to provide equal opportunities.[9]

Since James Coleman's landmark study of equal educational opportunity,[10] a third interpretation has gained currency; according to this view, opportunities are equal *only when results are equal.* What is meant by "equal results" varies in different versions of this interpretation: some authors argue that "equal results" means, literally, the *same results;* others argue for *equal progress* from the relatively different starting points of persons; others desire the common attainment of some *minimal level of achievement,* however much some persons may go beyond it; most recently, some have argued that "equal results" means *proportionate results,* where the distribution of results shows proportionate representation of each significant group in society at each level of achievement.[11]

Whatever the merits of these egalitarian goals, particularly in reference to education, we believe that these are not interpretations of "equal educational opportunity" at all, nor can it be guaranteed that the establishment of equal educational opportunities will achieve any of these goals. Because it is an essential feature of an opportunity that it can be ignored or passed up, the eventual choices of persons can never be held as criteria of whether or not an opportunity obtained. Equal educational opportunity is a procedural principle in which the *expectable* outcomes of certain provisions are the criteria of evaluation. A results-oriented interpretation may require certain policies which, in the attempt to equalize outcomes, might seriously contravene the rights of some persons, as in a case where students are "held back" despite their abilities. Furthermore, results-oriented interpretations carry compensation to a point where even choice and effort are "compensated for," as the factors which might prevent persons from taking opportunities are gradually chipped away but at this point one is no longer discussing *opportunities* at all.

In summary, it is important to keep in mind the *common* features of both formalism and actualism, features which are essential to the principle under any interpretation. First, the principle of equal educational opportunity is concerned with the provision of *access* to education in an equal and fair manner (although different interpretations may emphasize either equality or fairness). Second, the principle distributes opportunities for education, and not educational results (that is, equality of opportunity for education is not identical with equality in education). Third, the principle of equal opportunity can be viewed as a compromise between presumed rights of equality and liberty, in that something is equalized between persons (namely, opportunities) without contravening the liberty of persons to determine their own choices. Fourth, it is the expectable outcomes of opportunities which make opportunities equal or fair. Finally, the willing requirement of opportunity limits the range of human traits and abilities which can be compensated for, if one is still to speak of "opportunities". In turning to the criticisms of equal educational opportunity, we urge the reader to keep in mind that these have been raised against the principle under both the formalist and actualist interpretations (since the equal results interpretation is really not a view of equal opportunity at all).

CRITICISMS

1. The principle of equal educational opportunity tolerates a range of inegalitarian outcomes which do not seem consistent with common beliefs of what education can and should achieve. Major empirical studies by Coleman,[12] Jencks,[13] and Bowles and Gintis[14] have documented persistent inequalities of outcome despite dozens of major policies and programs instituted in the name of "equal educational opportunity."

In a sense, this is criticizing a fish for not being a bird; true, the principle of equal educational opportunity cannot guarantee equal educational outcomes, but it does preserve rights of free choice where policies which demand equal results would not. Although there are good reasons for desiring a more equal range of educational outcomes, it is not within the power of the principle of equal educational opportunity to insure this goal, in theory or in practice.

2. "Correspondence theory"[15] criticizes the principle of equal educational opportunity for focussing too much attention on schools or other educational institutions as the site of reform, when in fact reform must begin in the soci-

ety at large, especially within the economic spheres of income distribution and employment opportunities, before educational reform will even be meaningful. According to this view, equal educational opportunity is an example of "nonreformist reform,"[16] that is, an attempt at reform which does not alter the fundamental inequalities of society, an attempt which is at best ill-conceived and futile, and at worst a cynical ploy designed to perpetuate and legitimate unequal educational outcomes.

It has been well-established that "non-school factors" have a tremendous effect on educational opportunities and achievement;[17] in fact, the actualist interpretation of the principle takes account of this effect in planning compensations and alternative routes of access. But the criticism posed by correspondence theory is more radical than just a reminder of non-school educational factors; it demands *changing* these non-school factors, not just *compensating* for them.[18] The principle of equal educational opportunity, however, provides no basis for such change.

3. The principle of equal opportunity for education is a conservative principle, because it does not call into question the quality of experience for which an opportunity is provided: "Equality of opportunity will be worse than useless if the style of life to which it gives access is itself undesirable."[19] This point has been made in a different way by Robert Ennis, who argues that disputes over the principle often rely upon different conceptions of what an "education" should be.[20] By focussing attention on *how* to provide equal opportunities for education, the principle accepts the goal as worthwhile; but if, as one author notes, schools have become "standardized, bureaucratic, characterized by extrinsic motivation, uniformity, and authoritarianism,"[21] perhaps one should ask whether one *ought* to provide equal opportunities to attend them. However, the principle itself would not lead one to question the educational status quo.

4. The principle has been criticized for being overly meritocratic, in that it provides access to a meritocratic "ladder" of achievement without questioning the hierarchical nature of that ladder.[22] Like the third criticism, this view argues that the principle takes the nature of the educational experience for granted. This criticism misses the mark, however, when it claims that equal opportunities are distributed solely by merit, since the actualist interpretation, as noted earlier, considers *need* as well in the provision of compensatory options.

5. Many authors have criticized the principle of equal educational opportunity for being overly individualistic and competitive,[23] claiming that it really stands for an "equality of opportunism,"[24] that is, an "equal right to become unequal by competing against one's fellows."[25] We consider this an accurate assessment, although some persons would not consider it a criticism at all: "Truly effective competition strengthens rather than weakens that which deserves to survive."[26]

The most frequent response to this criticism, and to the fourth as well, is that the principle of equal educational opportunity is meritocratic, individualistic, and competitive only because we live in a liberal/capitalist society which is characterized by values of meritocracy, individualism, and competition, and that these are not essential features of the principle.[27] What may seem conservative in one context (e.g., a competitive meritocracy) might be extremely progressive in another context (e.g., a more deeply racist and sexist society).[28] At one time, indeed, the idea of providing equal educational opportunities for all persons was a radical notion! If it is a criticism of the principle to say that it enshrines the status quo, according to this response, that is a criticism of the status quo, and not of the principle itself.

This response, however, does not deflect the crucial point; in fact, it concedes that point: the principle of equal educational opportunity is conservative. It is certainly an improvement to have a principle which bases the distribution of opportunities for education on *relevant*, rather than *irrelevant*, characteristics. But the determination of "relevance" is only partly empirical, and is largely evaluative, relative to a social context and a framework of beliefs and values which can vary widely.[29] One can certainly question whether the principle of equal educational opportunity alone can undermine the biases and prejudices of any given social order; on the contrary, often the characteristics of "relevance" can be defined in such a way that the provision of "equal opportunities" simply perpetuates and legitimates whatever biased outcomes may be desired.

6. The principle of equal educational opportunity "blames the vicitm"[30] for failure by focussing undue attention on individual choice and effort, rather than on the responsibility of institutions to remove those barriers of hopelessness and perceived futility which make such decisions less likely. The bias of the principle towards meritocracy, competition, and individualism has profound and bitter consequences for the self-respect and self-esteem of those persons who fail.[31]

EQUAL EDUCATIONAL OPPORTUNITY: IDEAL OR IDEOLOGY?

Our review of these criticisms has, we hope, made the positive and negative aspects of the principle of equal educational opportunity more clear. On the positive side, it preserves certain right of liberty and free choice; it determines the distribution of opportunities for education on the basis of relevant, rather than irrelevant, characteristics; and it supports policies which will expectably equalize educational outcomes. On the negative side, the principle does not lead one to question the goals of education; it is a meritocratic, individualistic, and competitive principle; it cannot guarantee a more equal distribution of educational outcomes; and it is conservative and indeterminate[32] with regard to a broad range of social and educational outcomes. In short, given different determinations of "relevance,"[33] given alternative conceptions of "education,"[34] and given other social goals or principles,[35] the principle of equal educational opportunity could support nearly any kind of educational policy.

In light of these criticisms, we conclude that the principle of equal educational opportunity is inadequate. In itself, it represents a worthy educational ideal, but it is insufficient, by itself, to guarantee a decent education to every person in society, to guarantee a just distribution of educational outcomes, or to provide a normative basis for all the things we want education to do. It is reliance on the principle as if it *were* sufficient that has been characterized as *ideological*.[36]

By "ideology" we mean "that synthesis of ideas and representations designed to state an ideal and to motivate action. It may be true in some of its parts, but it is a gross oversimplification...."[37] By calling reliance upon the principle of equal educational opportunity ideological, we mean that it is "true in part" but is a "gross oversimplification"; while it "states an ideal" and "motivates action," it is inadequate by itself to guide educational policy.

ALTERNATIVES

If the principle of equal educational opportunity is inadequate by itself, what other principles must be added to it? In the remainder of this paper, we review several possibilities which outline a general direction or strategy for making the principle sufficient as well as necessary.

John Rawls acknowledged the inadequacy of the principle of "fair equality of opportunity" in his book *A Theory of Justice*; it must be supplemented by the Difference Principle, which stipulates that any distribution, as for education, must work to the "greatest benefit of the least advantaged in society."[38] Rawls states that the Difference Principle is characterized by a spirit of "fraternity", that is, "equality of social esteem...of civic friendship and social solidarity."[39] In short, it is a principle of altruism, which provides a normative basis for constraining the range of social outcomes which the principle of equal opportunity, alone, would find acceptable.

There are other characterizations of this kind of principle: one author calls for a spirit of "collectivism";[40] another for a feeling of caring, termed "caritas", which cannot be reduced to a formal principle,[41] Bernard Williams argues that more basic than the principle of equal opportunity is an "equal respect" for persons,[42] or what Brian Crittenden calls a concern for the "same overall level of good" for each person.[43] What these varied suggestions share is an attempt to articulate the sort of benign principle which will balance the indeterminacy of the principle of equal educational opportunity, which will hold it accountable to the effects of educational policies on the happiness and life-chances of persons. If the principle of equal educational opportunity is conservative, meritocratic, individualistic, and competitive, that may be because we live in a society that shares those values, rather than because these are essential features of the principle itself; but it *is* an essential feature of the principle itself that it does not call into question such values, or their consequences for the feelings, aspirations, and opportunity choices of persons.

Some additional principles are necessary in order to constrain the range of outcomes which the principle of equal educational opportunity would, by itself, tolerate; they are necessary in order to guide the determination of what is a "good" education; they are necessary as a context of social values within which determinations of "relevance," "equality," and "fairness" must occur; finally, they are necessary to prevent the biases or prejudices of any particular society holding total sway over the implementation of the principle of equal educational opportunity.

In summary, we have argued that the principle of equal educational opportunity is a necessary, but not sufficient, basis for educational policy; more is needed to insure a just distribution of education, and a decent education, for each person in society. We agree that the principle is in itself a worthy *ideal,* but at the same time we note that its use as a slogan, as if it could, by itself, provide a normative basis for all that we want our educational institutions to do, is *ideological.* That is, it is an oversimplification and a chimera to say to the disenfranchized: "you had your opportunities and you wasted them; now your fate is entirely your own fault."[44] What we have called for is a genuine spirit of collectivism: "a value orientation and mode of conduct that emphasizes social consciousness, concern for others, group solidarity, and moral commitment.[45]

We believe that a principle of collectivism can be spelled out more fully in terms of presumed human rights; at the same time, we acknowledge that the widespread adoption of such a principle is unlikely to occur in a society characterized by liberal/capitalist values, such as our own. Nevertheless, the evidence of the failure of the principle of equal educational opportunity, in theory and in practice, is so compelling that if we are to preserve the principle as a worthy ideal, we must acknowledge the extent to which it exists as a limited and counterproductive ideology.

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1. Max Rosenberg, "Proposed: An Equal Opportunity Amendment to the U.S. Constitution", *Phi Delta Kappan*, v.55 n.7. p.467.

2. See: Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America* (New York: Basic Books, 1976), ch. 4. C. A. R. Crosland, *The Future of Socialism* (New York: Schocken Books, 1963), ch. 8. Edward P. Morgan, *Inequality in Classroom Learning* (New York: Praeger, 1977), ch. 1. John Schaar, "Equality of Opportunity and Beyond", in *Nomos IX: Equality*, eds. Roland Pennock and John W. Chapman (New York, Atherton Press, 1967).

3. We have developed this view further in a longer paper, "Equal Opportunity: An Analysis" (unpublished paper).

4. See: B. Paul Komisar and Jerrold R. Coombs, "The Concept of Equality in Education", *Studies in Philosophy and Education*, v.3 n.3, pp.223-244.

5. Ralph Page, "Opportunity and its Willing Requirement", *Proceedings of the Philosophy of Education Society, 1976*, pp. 296-305 and T. D. Campbell, "Equality of Opportunity", *Proc. of the Aristotlean Society, 1974*, p. 54.

6. Robert H. Ennis, "Equality of Educational Opportunity", *Educational Theory*, v.26 n.1, p.14.

7. See, for example: William Blackstone, "Human Rights, Equality, and Education", *Educational Theory*, v.19 n.3, pp. 291-292.

8. Komisar and Coombs, op. cit.

9. Daniel Bell, "On Meritocracy and Equality", in *Power and Ideology in Education*, eds. Jerome Karabel and A. H. Halsey (Oxford University Press: New York, 1977), p. 609.

10. James Coleman, *Equality of Educational Opportunity, Summary Report* (U.S. Office of Education, 1966).

11. See, for example, Onora Nell, "How Do We Know When Opportunities Are Equal?", in *Women and Philosophy*, eds. Carol C. Gould and Marx W. Wartofsky (New York: Putnam and Sons, 1976).

12. Coleman, op. cit.

13. Christopher Jencks et al., *Inequality* (New York: Harper and Row, 1972).

14. Bowles and Gintis, op. cit.

15. Ibid., ch.5 and passim. See also Michael Carter, "Correspondence and Contradiction" in *The Limits of Educational Reform*, eds. Martin Carnoy and Henry Levin (New York: David McKay, 1976).

16. Herbert Gintis, "A Radical Critique of Ivan Illich", *Harvard Educational Review*, v. 42 n. 1, p.93.

17. See, for example: Alec Clegg, "How 'Equal' is 'Opportunity'?", in *The Challenge of Educational Change*, eds. Maurice Kogan and Margaret Pope, (Great Britain: NFER Publishing, 1972).

18. Bowles and Gintis, op. cit., ch.11, and Samuel Bowles, "Towards Equality of Educational Opportunity", *Harvard Educational Review*, v.38 n.1, p.95.

19. Brian Crittenden, *Education and Social Ideals*, (Longman Canada Limited, 1973), p. 207.

20. Ennis, op. cit., pp. 7,8.

21. Morgan, op. cit., p.11.

22. Morgan, Schaar, Crosland, and Bowles and Gintis all make this claim. See also: Michael Young, *The Rise of the Meritocracy* (London: Thames and Hudson 1958).

23. Ibid.

24. Brian Lord suggested this phrase to us; it is quite clever and we had never heard it before.

25. Schaar, op. cit., p. 230.

26. Kenneth Clark, "Alternative Public School Systems", *Harvard Educational Review*, v.38 n.1, p.111.

27. Donald R. Tunnell, "Equal Opportunity Revisited" (unpublished paper, University of Illinois) pp.3,4.

28. Crittenden, op. cit., pp.204,205.

29. William Blackstone, "The Principle of Equality and Educational Opportunity", *Proceedings of the Philosophy of Education Society, 1965*, pp.69,70.

30. See: William Ryan, *Blaming the Victim* (New York: Vintage Books, 1971).

31. See: Richard Sennett and Jonathan Cobb, *The Hidden Injuries of Class* (New York: Vintage Books, 1973) offers a moving account of the human consequences of success and failure.

32. Gregory S. Kavka, "Equality in Education", in *Indeterminacy in Education*, ed. John E. McDermott, (Berkeley: McCutchan Publishing, 1976).

33. Blackstone, op. cit.

34. Ennis, op. cit., pp.7,8.

35. Myron Lieberman, "Equality of Educational Opportunity", in B. O. Smith and Robert H. Ennis, *Language and Concepts in Education* (Chicago: Rand McNally, 1961), p.140.

36. A perfectly unambiguous use of this term would require a longer review of the concept of ideology and its role in various social theories; we wish to emphasize that an "ideology" is usually considered to be false or misleading, and we rely on that connotation here.

37. Michael B. Katz, *The Irony of Early School Reform* (Boston: Beacon Press) p.14.

38. John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971), pp. 83-90.

39. Ibid., p.105.

40. Elizabeth Cagan, "Individualism, Collectivism, and Radical School Reform", *Harvard Educational Review*, v.48 n.2.

41. Louis Arnaud Reid, "Equality and Inequality", *British Journal of Educational Studies*, v.6 n.1, p.61.

42. Bernard Williams, "The Idea of Equality" in *Moral Concepts*, ed. Joel Feinberg (Oxford University Press, 1969) p. 171.

43. Crittenden, op. cit., p.201.

44. For example, see Michael Lewis's account of the individualization of success and failure: *The Culture of Inequality* (Amherst: University of Massachusetts Press, 1978).

45. Cagan, op. cit., p.228.

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RESPONSE TO BURBULES AND SHERMAN

Thomas F. Green
Syracuse University

Nicholas Burbules and Ann Sherman have provided us with a provocative paper. The issues are of first importance and require our best and most careful consideration. Their arguments invite extended and detailed treatment. In a brief reply, one cannot hope to do justice to such a rich array of problems. One can only focus upon one or two points. That is what I hope to do. But, in doing so, I hope also that a few simple and pointed critical remarks will not be taken as any expression of a lack of appreciation for the issues that they call to our attention. I wish to be quite deliberate and forthright in this expression of thanks for their paper. Let me then call to your attention a few points that I think are vital to the claims they advance.

At the beginning, they say quite clearly that by "equal educational opportunity" they mean "an 'equal opportunity for education,' " and they assert that "phrased in this way, the principle can be understood as a distributive principle concerned with providing *access* to education." They also describe it as a procedural principle. It is vital, I believe, to grasp this formulation. It is a formulation that permits them to claim correctly, I think, that the distributive principle of equal educational opportunity does not require equal outcomes from the educational process. In other words, at the very beginning, they reject the notion that a *just* distribution of educational opportunities requires an *equal* distribution of educational results.

It follows from this view that we might secure equal educational opportunity in all its glory and still have unequal educational results between different social groups. But to claim that we have an unequal distribution of educational benefits is very different from claiming that we have an *unjust* distribution of benefits. I believe that Burbules and Sherman want to add the claim that securing an equal distribution of educational opportunities is compatible with having an *unequal and unjust* distribution of results. If they do mean this, then I think they are quite mistaken. Equal educational opportunity is quite compatible with an unequal distribution of educational benefits, but it is incompatible with any distribution of education benefits that is both unequal and unjust.

I believe that the central argument that Burbules and Sherman seek to advance can be given two renderings. The first goes something like this. Equal educational opportunity is compatible with a variety of unequal distributions of educational benefits. (We are on safe grounds so far.) Nevertheless, among the different potential kinds of unequal distributions, there are some that are unjust. (We are still on safe grounds.) Therefore, the ideal of equal educational opportunity is compatible with *unjust* distributions of educational benefits. (We have just slipped off the edge.) The argument is clearly fallacious. That inequalities of benefit are permitted does not imply that *all* such unequal distributions are permitted. Nevertheless, I believe that this is the argument that they advance. It is hard to say.

But there is another tendency of thought on this point that is, on the surface, logically more impeccable, but also discoverable in their paper. It goes like this. The attainment of equal educational opportunity is compatible with unequal distributions of results. But if we are inclined—as we surely are—to suppose that some of those patterns of distribution are unjust, then we cannot have grounded our judgment, our sense of injustice, in the principle of equal educational opportunity, because that principle, having to do with access and not with equality of results, will not tell us which, if any, distribution of benefits is unjust. Our sense that some distributions are unjust, cannot be derived from the principle of equal educational opportunity. Therefore, the principle of equal educational opportunity is an insufficient guide to distributive justice in education. This is what leads them to the conclusion that it is an inadequate principle, that it is defective, that it needs to be supplemented by other principles.

If there is any logical fault or informal fallacy in this argument, it would be that it begs the question. The very thing that needs to be established is that the principle of equal educational opportunity, adequately formulated, is compatible with *unjust* as well as unequal distributions of educational benefits. But this proposition, which is what needs demonstration, appears, I believe as a premise in the argument that Burbules and Sherman advance. Yet they provide no evidence of its truth.

It seems to me that what needs detailed notice, and what Burbules and Sherman have systematically avoided is this. Even though an equal distribution of educational opportunities does not *require* an equal distribution of outcomes, nevertheless, when outcomes are drastically and blatantly unequal and when the inequality is patterned in certain ways, then we do take and are warranted in taking that as prima facie evidence of the existence of unequal educational opportunity. Furthermore, when we discover that these inequalities of outcome are extreme and that they get progressively worse through time, then we have even stronger evidence that there has been inequality in educational opportunity.

Now I admit that such inferences require a great many assumptions, more than we can possibly explore in the time allowed. But consider the central point. Equal outcomes, as Burbules and Sherman point out, *cannot be taken as the criterion* of equal educational opportunity. Nevertheless, (my point) such inequalities *do count as evidence* of unequal educational opportunities. Therefore, the appeals we make to such evidence in the name of equal opportunity must be captured by any adequate formulation of the principle of equal educational opportunity. If we could secure such a formulation we would have to discover that though our formulation permits inequalities in the distribution of benefits, it will not permit just *any* inequality. It will not sanction unequal *and* unjust distributions of benefit. If our formulation of the principle cannot meet this test, then it cannot be an adequate formulation because it will have failed to capture our ordinary consciousness of the matter. But now I have challenged our authors for their failure to actually produce the principle that they so critically appraise. It seems to me that in all fairness I am obliged to produce the needed principle in a simple and direct way, and in so doing show that the principle of equal educational opportunity neither has the shortcomings they describe nor is it ideological in the sense that they claim. How can this be done?

I believe that in this, and in all other cases like this, we should proceed by asking first what human interest we seek to express by the principle in question. And then, having understood that, I believe we will be in a position to state the principle quite simply. So what is that underlying human interest? When we enter into discussions of equal educational opportunity, I believe, we voice our fundamental interest in reaching a particular social state of affairs. And that state of affairs can be described as one in which it is impossible to predict the placement of any individual in the distribution of educational benefits or in the distribution of associated social benefits, *except* on the basis of what we commonly acknowledge to be the educationally relevant attributes of that person.

The central point of this interest is not to specify what constitutes an equal opportunity nor does it require us to identify equal opportunity, nor does it require an equal distribution of benefits. Rather, our concern is that whatever inevitable inequality results in the distribution of educational benefits that inequality should rest upon morally acceptable and educationally acceptable grounds. When we argue, for example, that educational benefits should not be differentially distributed to persons on grounds of sex, race, religion, class or geography, we are claiming that these attributes, arising as a matter of good or ill fortune, are not appropriate grounds on which to differentially distribute the benefits of education. In other words, what we are claiming in every case, is that such distributions are unjust because they are apparently based upon educationally irrelevant attributes of persons.

The principle can then be stated explicitly and simply. It is that *the benefits of education should be distributed unequally to persons in accordance with the unequal distribution of educationally relevant attributes in the population.* Now I would claim that this principle comes about as close as we can come to a formulation of "*the* principle of equal educational opportunity." Why do I say this? Because I believe that there are no arguments either in actual life or that can be concocted concerning the *injustice* of educational distributions except arguments that appeal to this principle. Indeed, I believe that there are none that do not *rest* upon an appeal to this principle. Notice: I am not saying merely that all *good* arguments about equal educational opportunity always appeal to this principle. I am saying that all arguments—good or bad—rest upon this principle. Therefore, such a principle is necessary in the sense that without it no arguments concerning the issues of equal educational opportunity can be formulated. I realize that this is an outrageous statement to make. I state it, however, with a high degree of assurance, and yet with a readiness to yield if anyone can produce the exception.

But there are other interesting and important features to note about this principle. The first is that, with one exception, it has none of the critical features that Burbules and Sherman direct toward what they call "the principle of equal educational opportunity." (1) It does not necessarily lead, but it can, and sometimes has led people to question the goals of education. (2) Although it does take merit into consideration, its application is not limited to a meritocratic society in the sociological sense. (3) And, as far as I can see, neither is it necessarily individualistic, or competitive. (4) Of course, the principle itself cannot *guarantee* more equal distributions of educational outcomes. But to ask that is to ask more than should be asked of any principle. Nevertheless, even though it does not require an equal distribution of outcomes, it can and often does impose upon us an obligation to try to obtain a more equal result. (5) Therefore, it is surely not a conservative principle per se, although in a truly good society it would be conservative in the best and most literal sense of "conservative." The one point that Burbules and Sherman make by way of criticism that seems to me correct is that (6) such a principle is indeterminate, and this point needs some consideration.

It is indeterminate in the way that a blank check is indeterminate, which is the kind of indeterminacy shared by all rational principles from logic and morality to political theory and plumbing. It is indeterminate in the way that a propositional function is indeterminate. In order to get a practical sentence out of the principle we need to fill in values for the variables. In this case, we need to determine in any given case what will constitute an educationally relevant attribute of persons. Remember that the principle permits inequality, but not every inequality. It permits only those that arise from the presence of educationally relevant attributes. If we count merit as a relevant attribute in this sense, then we will permit inequalities to arise as a consequence of merit. But then we have to determine what kinds of merit count. Will it be mastery of standard English? Will it be some kind of ability? If we permit inequalities to arise from the exercise of choice, as Burbules and Sherman are prepared to do, then choice is regarded as a relevant attribute permitting such unequal distributions. But then the question arises as to how we can practically determine and create the conditions of free choice? With this move we have arrived at what our authors describe as the "actualist" position. That position is a direct derivation of the principle I have stated. In short, what is at issue in all such arguments is the definition and practical identification of what we will count as relevant human attributes and, therefore, what we will count as a just but unequal result.

This is the indeterminacy that Burbules and Sherman find fault with. I suggest that it is there, but that it is no fault, unless it is a fault shared with modus ponens together with every moral principle and every legal principle. Nevertheless, I must admit that sometimes the arguments used to "fill in the blanks" of the principle are ideologically shaped. That is to say, in *applying* the principle, ideology may play a role. But we should note two things. The first is that this truth is quite compatible with the most explicit denial that the principle itself is ideological in any sense. Indeed, in the light of what I have already said, we can conclusively argue that the principle cannot possibly be an ideological principle. The reason it cannot is that it is a principle required by every ideology without exception if that ideology permits any discussion at all of educational justice. If it is required in every ideology, it follows immediately that it cannot be an ideological principle. The second point to note is this. I admit that the applications of the principle are sometimes shaped by ideology. That this *must* happen or that it *always* happens, however, I see no grounds to believe nor do I see that Burbules or Sherman provide any such grounds.

Permit me one final pair of observations. I think there is a certain deep risk in the tendency to see educational issues and problems of educational policy as always based in ideological differences. In saying so, I do not wish to deny the political importance of different world views. I wish rather to point to the fact that when policy issues are seen as rooted in ideological differences, then their resolution is necessarily seen as a kind of evangelical enterprise of ideological conversion. As one who has more than a nodding acquaintance with "the former evangelical enterprise," I think I can assure you that we haven't the time for another. And besides, if ideologies are important in deciding public issues, then public issues necessarily deal with deciding questions of ultimate importance. Politics, in short, then becomes ideological as well as evangelical. And these are precisely those conditions that are most uncongenial for the nurture of a democratic society.

And finally. Perhaps we need to be reminded, that we may be warranted, from time to time, in ranking other values higher than justice. For example, I suspect that most of us would find it easier, and in some sense better, to live in a world where we are openly treated unjustly, than to live in a world in which we are justly declared to be incompetent. The value of justice, like the value of all social and personal virtues, is limited.

And so, if we were to imagine a society in which equal educational opportunity is achieved, and in which its achievement is construed as requiring an equal distribution of educational benefits, then we would have imagined a socieity that has paid an enormous cost. The cost would be that we would have wiped out the differential educational effects of families. But we would also have sacrificed the differential effects of different religious traditions, different cultures, and different regional characteristics. If we understand equal educational opportunity so that a *just* distribution of educational benefits is incompatible with an *unequal* distribution, then equal educational opportunity is in direct conflict with pluralism. If that is our understanding, then it follows that the best society we can practically imagine achieving would be one in which equal educational opportunity is never quite attained. Its realization will always be abridged or limited by the presence of other values. One solution to this problem is to recognize that the ideal of equal educational opportunity permits an unequal distribution of educational benefits, but that it does not permit an unjust distribution of benefits. But it will permit some to excell more than others, however, and will probably require some to excell only at greater sacrifice than others.

What we need to struggle toward, it seems to me, is not so much a new principle of equal educational opportunity. The one I have stated is both necessary and sufficient for the educational enterprise. What we need rather is to struggle toward a fresh understanding of what inequalities are morally acceptable in the distribution of educational benefits. For this, the principle that we already use is also adequate. And with this conclusion, I assume that the debate is joined.

BEHAVIORISTIC EDUCATIONAL THEORY: ANALYSIS OF THE PHILOSOPHICAL DEBATE

Brenda Munsey
University of Alabama–Birmingham

Behavioristic literature has a wide audience today among both school personnel and education professors.[1] For this reason philosophers concerned with the analysis of recent educational discourse would have to be behavioristic thinking "seriously," at least in the sense that such thinking is in fact a major constituent of contemporary discussions of schooling. They might also take behavioristic proposals "seriously" in another sense, namely, in the sense that even a superficial analysis of behaviorism's proposals for educational discourse indicates that their adoption would profoundly alter the language of education.

However, for philosophers informed by linguistic philosophy's devastating critique of behaviorism, it may not be at all obvious that behavioristic thinking ought to be taken "seriously" as a viable theory of education. The linguistic critique of behaviorism had purportedly demonstrated the logical impossibility of exhaustive behavioristic accounts of human behavior. Thus, even if the analysis of contemporary educational discourse does require philosophers at least to deal with the behavioristic thinking implicit in so much of that discourse, still it might not require them to develop new lines of argument in order to adequately critique behavioristic positions. If, indeed, the linguistic critique of behaviorism is a successful "reduction to absurdity," as was claimed, then the continuing efforts of theorists like B. F. Skinner to argue behaviorism's case could be shown, a priori, to be doomed to failure.

The linguistic critique of behaviorism (and its reductionistic underpinnings) emerged during the early fifties and has since largely dictated philosophy's treatment of behavioristic positions. Given the existence of that critique, it would seem that anyone who subsequently advocated behaviorism could be dissuaded by merely informing him of the already existing critique of that position. No new arguments would have to be developed to deal critically with new behavioristic proposals; rather the critical task would be largely pedagogical. For sophisticated educational theorists, behaviorism had apparently become a "strawman."

The question to be addressed in this paper is whether successful criticism of behavioristic proposals requires that theorists open new lines of argument in addition to the well-known forms developed by linguistic philosophy. I will argue that the classic linguistic critique, while effective against the reductionistic behaviorism of theorists such as Clark Hull, is not adequate for behavioristic positions which can be articulated independently of reductionism. Further, I will examine the positions of a nonreductionistic behaviorist, B. F. Skinner, to show specifically wherein these positions escape the purportedly devastating linguistic criticism. Finally, I will examine Skinner's pragmatic philosophy of science in order to show the new ground which pragmatism provides for adjudicating the behaviorism-mentalism controversy. On the basis of this analysis, I will have shown that adequate criticism of contemporary behavioristic proposals regarding education does require philosophers to employ arguments other than the standard linguistic objections to behaviorism.

THE TWENTIETH CENTURY DEBATE OVER BEHAVIORISM

Twentieth century philosophy has provided three fundamentally different paradigms for adjudicating theoretical disputes. Thus, three alternate formulations of the beahviorism-mentalism controversy have emerged: one based on "reductive analysis" and the presuppositions of atomistic empiricism, a second based on "conceptual analysis" and linguistic philosophy, and finally, one grounded in pragmatism. For philosophers conversant with the strong pragmatic movement in contemporary philosophy of sicence,[2] it is undoubtedly disturbing to find that serious critiques of behaviorism continue to be developed solely on the model of the linguistic critique of reductionistic behaviorism. This is disturbing for at least two reasons. First, given that pragmatists like W. V. Quine have specified a nonreductionistic basis for formulating behaviorism's case. It is no longer warranted to assume that behavioristic positions depend on reductionism. Second, the pragmatic explication of the limitations of "conceptual analysis" challenges the sufficiency of the very line of argument linguistic philosophers had used to establish the logical impossibility of behaviorism. Yet in spite of the existence of this explication, much influential philosophical criticism of behaviorism continues to rely on the sufficiency of the linguistic argument. Indeed, the wide acceptance of this argument probably accounts for the failure of many philosophers to provide fresh, careful analyses of B. F. Skinner's rather unique formulation of behaviorism. It is common knowledge among those familiar with the primary sources that Skinner's positions have frequently and consistently been distorted. The fruitfulness of future debate of Skinner's proposals for modifying the language of education will require careful analyses of those proposals to correct certain blatant, but nevertheless prevalent, misinterpretations of radical behaviorism. Linguistic criticism has indeed tended to gloss the distinction between Skinner's program and the response-conditioning programs of classical behaviorism.[3] Given the relevance of philosophy's meta-level debate for the controversy over behaviorism, there is a need for reëxamining Skinner's proposals for education against that evolving backgrounds of issues.

The positions of classical behaviorists like Clark Hull presupposed reductionistic philosophy of science. Hull assumed that teleological sentences could be scientifically understood only if they were translated into a language whose "basic elements" were "colorless movement and mere receptor impulses.[4] He thought that there were no empirically meaningful statements about human action which could not, in principle, be translated into this more basic language. According to reductionistic metapsychology, if ordinary teleological statements were not "reducible" to such behavioral statements then that meant they lacked "cognitive significance." The presumption of classical behaviorism's effort to translate ordinary psychological statements was that such discourse did indeed have cognitive significance.

The faithful use of reductive analysis was believed to further one of the presumed goals of scientific inquiry, namely, a unity of the various conceptual schemes employed in scientific discourse. Philosophers such as Rudolf Carnap claimed that reductive analysis "would reduce the whole of science to the basic elements out of which it was built."[5] This task meant that scientific reports in areas thought to employ a relatively "complex" language, such as psychology, would at some point be translated into the more "basic" language of areas such as physiology.[6]

The shift from *reductive analysis* to the program of *linguistic analysis* was part of a radical transformation of analytic philosophy. New methods of formulating and debating philosophical issues came to be used.[7] The former program of reductive analysis was discarded for having presupposed "the existence of exact quasi-definitional relations between classes of concepts" which could not be shown to exist.[8] On the contrary, according to linguistic philosophers such as P. F. Strawson, analysis reveals that there are multiple conceptual schemes implicit in human thinking which are, relative to one another, logically autonomous. This and other such claims about our conceptual scheme were to be established by "carefully and accurately noting" our ordinary use of language.

Linguistic philosophers like Strawson helped to redefine the task of philosophical analysis. Its goal now became explication of the concepts in terms of which ordinary thinking is carried on. The task of describing our most fundamental concepts was referred to by Strawson as "descriptive metaphysics." In characterizing this task, he stated that there is a "massive core" of "categories and concepts which, in their most fundamental character, change not at all."[9] The goal of descriptive metaphysics was to provide an explication of this "indispensable core of the conceptual equipment of the most sophisticated human beings."[10]

Among the concepts which linguistic philosophers have claimed to be "indispensable" to our way of thinking about ourselves, our behavior, the task of shaping that behavior, etc., are ordinary teleological concepts. Conceptual analysis is said to demonstrate the impossibility of behaviorism's attempt to eliminate ordinary teleological language in favor of a purportedly "more basic" behavioral language. Although subsequent linguistic philosophers have tended to be a bit more cautious than Strawson about the metascientific significance of "conceptual analysis," this paradigm has nevertheless largely shaped the manner in which behaviorism's proposals for education have been conceived and debated by analytic philosophers since the early fifties.

In demonstrating the logical impossibility of purported behavioral translations, linguistic philosophers believed that they had thereby established the utter futility of behaviorism's effort to provide a comprehensive empirical account of human activity.[11] Given the analytic truth that ordinary psychological concepts are "basic" in the sense that they cannot be defined in the purportedly "simpler" behavioristic language, they concluded that human activity cannot be adequately described and explained in behavioristic language.

However certain prior questions can be raised about the sufficiency of this critique of behavioristic psychology. For example, is a logical analysis of a language used to talk about the world sufficient warrant for drawing a priori conclusions about the nature of that world? While analysis of our ordinary way of talking about psychological phenomena may well warrant drawing conclusions about what such phenomena are "really" like, why should such conclusions be granted the status of a priori truths? This and related questions emerged to challenge the metaphysical assumptions of the linguistic critique of behaviorism.

In contrast to the Strawsonian position, an alternative "revisionary metaphysics" is advocated by pragmatically oriented philosophers. They contend that the drawing of a priori ontological conclusions is not warranted by linguistic analysis alone. Rather, man's use of language to talk about the world must itself be viewed as something which happens in the world. And given this view, it is no longer evident why our metalinguistic characterizations of language usage ought to be viewed as stating a priori truths--either about the nature of human thinking about the world, or about the nature of the world.

The ordinary language of education embodies our theoretical presuppositions about psychological phenomena. Given that it is (at least) possible to argue that the so called "world theories" implicit in ordinary psychological discourse ought to be "displaced" by better theories, then linguistic philosophy's appeal to the existing conceptual categories of ordinary discourse is not a sufficient argument for rejecting a proposal like B. F. Skinner's that we adopt behavioristic language as the more correct way of thinking about psychological phenomena. Skinner clearly sees his own proposals for universalizing the language of psychology as part of an effort to "de-mythologize" ordinary psychological discourse. His behavioral analysis is meant to challenge the "myth" of autonomous man—whose existence is presupposed by ordinary psychological language. Skinner is not arguing that his proposed behavioral "translations" are logically equivalent to the concepts of ordinary psychological discourse (as did reductionistic behaviorists such as Hull). Rather he is proposing that we adopt behavioral language *as the ordinary way,* on grounds that the psychological theory now implicit in ordinary psychological discourse is an incorrect empirical theory. As "inconceivable" or improbable as Skinner's proposed conceptual shift might appear to us, it cannot be ruled out by the merely a priori argument provided by linguistic philosophy.

Pragmatism's "displacement hypothesis" provides behavioristic psychology with a nonreductionistic basis for arguing for the elimination of ordinary teleological concepts. As contrasted with the "reductionistic hypothesis", it is the thesis that although our ordinary psychological language may not be reducible to say, behavioristic language, there might nevertheless be grounds for "displacing" our ordinary psychological concepts in favor of those of behaviorism.

LINGUISTIC CRITICISM OF BEHAVIORISM

The crux of linguistic criticism of behavioristic psychology is that it rests on a logical mistake. The purported impossibility of a specific behavioristic theory's being correct is not a contingent matter, subject to scientific study, but rather is regarded as a matter of logical necessity. Given the validity of the linguistic argument, the efforts of theorists such as B. F. Skinner must be viewed as futile since necessarily, science cannot amass *empirical* evidence which could challenge established a priori truths. To quote R. S. Peters on this point:

> Psychology has not soared into its Galilean period as is often thought, through lack of bright ideas, experimental ingenuity, and methodological rigor. It has remained earthbound in mazes and Skinner boxes because the highly general theories which, it was hoped, would emerge, are logically impossible.[12]

Peter's position on the actual impossibility of exhaustive nonteleological accounts of human behavior was based on the logical impossibility of behavioral translations of ordinary psychological language. Use of conceptual analysis was said to establish the existence of an unbridgeable "logical gap" between descriptions of "what happens to persons" on the one hand and descriptions of "what persons do" on the other. Mentalistic terms and behavioristic terms were shown to belong to two autonomous realms of discourse; and within each realm, different forms of explanation were appropriate. Thus, for a psychologist to assert that ordinary psychological explanation can be assimilated to behavioristic explanation is to make a logical error known to linguistic philosophers as a "category mistake."

The above linguistic line of argument is an inadequate basis for adjudicating the behaviorism-mentalism dispute in psychology. By examining linguistic philosophy's "category mistake" argument we can further clarify this inadequacy. "Category mistake" refers to a logical mistake thought to result from usage which combines terms from different conceptual categories as though they belonged to the same conceptual category. If terms from distinctive realms of discourse, for example, ordinary mentalistic language and behavioristic language, are juxtaposed in this manner, the resulting statements are said to be either metaphor (if meaningful) or else a category mistake (and hence meaningless). The claim that behavioral translations of ordinary psychological terms are "category mistakes" means that they are neither true nor false, but rather are meaningless.

The task of establishing that particular statements were indeed category mistakes entailed criteria for determining that the terms conjoined in such discourse belong to distinctive realms of concepts. Accordingly, it was believed that two concepts could not be of the same logical category if their respective spheres of usage were mutually exclusive, and if they could not (meaningfully) receive some of the same groups of descriptive predicates.[13]

A strategy commonly used by linguistic philosophers in assessing whether two terms can receive the same groups of descriptive predicates was "sentence framing." By substituting terms in given sentence frames, it was thought that we could demonstrate the logical incompatibility of two sets of terms. A classic example of the use of this strategy is Gilbert Ryle's *The Concept of Mind,* in which Ryle argues that mental concepts and physical concepts are of different logical types, and that the attempt to understand mental activities in the physicalistic language of behaviorism is a category mistake.[14]

Suppose (for the sake of argument) we grant that a behavioristic account of human activity involves a mistake of some sort; must it be regarded as a logical rather than empirical mistake? Linguistic analysis of ordinary usage would presumably show that teleological language is not an *appropriate* language for literal discourse about things such as stones or billiard balls. Referents of "stone" are simply not the *kind of things* which can literally be said to have "intentions" or "reasons." Accordingly, to speak of a stone's "reason for crushing an ant" must necessarily be treated either as metaphor or else as a meaningless utterance—a logical mistake.

However, in contrast to linguistic assumptions, we are not logically bound to regard nonmetaphorical statements conjoining "stone" and "intended to kill an ant" as logical mistakes (i.e. category mistakes). It is at least possible to treat them as meaningful statements, involving an empirical mistake. Our actual identification of the type *of mistake* involved in such statements depends on the *type of case* we believe is required to establish that the resulting statements are mistaken. For instance, do we know that it is a mistake to make a claim about "a stone's intentions" because we know something about the world (specifically, that the referents of "stone" are not in fact "intending things")? If yes, then we would treat the sentence "the stone intended to kill the ant" as meaningful, but empirically false. In contrast, if we know that it is a mistake to assert such a sentence because we know something about language (i.e., that the implications of the expression "intending thing" and "stone thing" are incompatible), then the claim would be regarded as meaningless.

The analytic literature provides some clear cases of the logical type of mistake—for example, "The number seven is a lovely green." What makes this a clear case is the fact that the range of usage of the mathematical term "seven" and the range of usage of the physical object term "is a lovely green" are mutually exclusive. However conjoining "intending things" and "stone things" is not a similarly clear case since each of these predicates is used to talk about the world. Since both are used in empirical discourse, it is reasonable to argue that "The stone intended to kill the ant" states something meaningful, i.e., something which is logically possible, but which happens to be empirically false.

Logically impossible statements have traditionally beeen divided into two groups: statements which are false because of their form alone; and analytically false statements. Analytically false statements are implicit contradictions whose falsehood can be established by conceptual analysis. But establishing by analysis that a particular statement is analytically false requires at least an interim acceptance of a particular conceptual scheme. That is, the claim "P is analytically false" presupposes the existence of a certain conceptual scheme within which the terms used in P stand in a certain relation to other terms and to each other. Thus a given statement can be shown to be analytic only for a given conceptual scheme.

Empirical conceptual schemes have usually been regarded as (in some sense) contingent.[15] Thus, the mere fact that a sentence is analytically true or false for a language used to talk about the world would presumably not rule out the possibility that empirical discoveries might result in our modifying the theoretical presuppositions of this language. This in turn might alter the meaning of a sentence previously said to be analytically true or false.

According to linguistic philosophers, analysis of ordinary psychological concepts demonstrated that behavioral "translations" were logically impossible. In turn, this was thought to warrant their claim that behaviorists ought to give up their (purportedly) absurd attempt to construct sufficient nonteleolgical accounts of human behavior. However, the sufficiency of this a priori argument depends on the questionable epistemological position that extra-logical (a posteriori) considerations are not relevant to assessing the merits of theoretical proposals for modifying a language used to talk about the world. A behaviorist like Skinner could readily grant the logically true claim that *the something* presupposed by ordinary psychological language is not the same kind of thing as behavioristic language presupposes. But the interesting ontological question would still remain as to which kind of thing human activity *really* is—that presupposed by ordinary language or that presupposed by behavioristic language (or perhaps some third alternative). Skinner's way of dealing with the question of the nature of human activity is to treat it as scientific issue, to be adjudicated by the psychological community on the basis of its criteria for the acceptability of theories.[16] Whereas Skinner's ontological "inference" is based on the norms of science,[17] linguistic philosophers base their "inference" on a logical analysis of ordinary empirical discourse. But surely an adequate critique of Skinner's proposed revisions of ordinary psychological language would have to go deeper than an analysis directed at establishing a premise which Skinner himself has no stake in disputing—namely, that Skinner's "translations" are not adequate logical reductions.

The issues between Skinner and linguistic philosophers over the language of psychology run very deep, involving fundamental difference over metaphilosophical questions about the study of langauge. For example, linguistic analysis of language presupposes a conception of the "logic of an utterance" which is specifically challenged in Skinner's theory of verbal behavior. Linguistic analysis appeals to "what a speaker intends in an utterance" as a basis for explicating the logical differences among utterances. In contrast, according to Skinner's empirical account of language, "varying stimulus conditions," rather than "intentional differences" among utterances is the basis for explaining particular utterances. There seems to be no adequate a priori reason why "reinforcing modifications in the speaker's environment" could not be used as the basis for categorizing various "uses" of ordinary expressions. The fact that we ordinarily use a speaker's intentions for this purpose is not a sufficient (a priori) justification for continuing to do so (unless that ordinary mode of analysis is viewed in the questionable metaphysical framework of Strawson's "descriptive metaphysics"). I have elsewhere examined the significance of these issues for the behaviorism debate.[18] and a further analysis of the "intentionalist–extensionalist" controversy in linguistics and philosophy of language is beyond the scope of the present paper. I merely want to point out that Skinner's proposals challenge some very basic presuppositions of the argument employed by linguistic critics of behaviorism. Hence such presuppositions cannot simply be taken for granted (but must themselves be defended) in linguistic criticism of behaviorism.

B. F. SKINNER'S METAPSYCHOLOGICAL THEORY

Skinner refers to his own theory as radical behaviorism in an effort to underscore his differences with classical behavioral positions. Classical positions presupposed reductionistic philosophy of science; Skinner's formulation does not. On the contrary, I will argue that Skinner's metapsychological assumptions are pragmatic. Undoubtedly, Skinner's formulation has a lot in common with reductionistic behaviorism. But even where there is a clear overlap bettween the two, Skinner's justification is likely to be different. For example, like earlier behaviorists, Skinner denies that "intention" and "reason" refer to causes; yet the grounds for his position are quite diffierent. According to Skinner, reductionistic behaviorists did not use mentalistic terms such as "intention" or "reason" in their psychological accounts *because* they believed that "there could be no public agreeement about their validity" and *because* they assumed that "introspection could not be accepted as a scientific practice."[19] They had thought that psychological hypotheses could be counted as empirical only if they could be verified in relation to a foundation of publicly observable data. Since first person reports of "feelings" were presumably not publicly verifiable, they were thought to be empirically meaningless, and hence had to be eliminated in favor of behavioral translations.

In contrast, Skinner's program does not completely do away with subjective reports. In fact Skinner is critical of behavioral positions which ruled out reports of "covert behavior" on grounds that they were not "objective." According to Skinner,

> Covert behavior is also easily observed and by no means unimportant, and it was a mistake for methodological behaviorism and certain versions of logical positivism and structuralism to neglect it simply because it was not "objective." It would also be a mistake not to recognize its limitations.... It does not explain overt behavior; it is simply more behavior to be explained.[20]

Skinner claims that his own view, "radical behaviorism," diverges from methodological behaviorism precisely because "[it] does not deny the possibility of self-knowledge or its possible usefulness, but it questions the nature of what is felt or observed and hence known."[21]

On the basis of such claims, it is evident that what Skinner assumes about the nature of empirical sentences does not conform to the assumptions of methodological behaviorism. Skinner treats subjective reports as empirical claims; but contends that "introspectively" observed phenomena is not to be treated as a cause of behavior, but simply as "more behavior." In his view, classical behaviorism's rejection of introspection as a method of gathering data was a mistake. Given this position Skinner could hardly argue that "mentalism" is unempirical on grounds that such a psychology employs reports of "unobservable" mental phenomena. Use of such reports was of course part of classical behaviorism's argument against mentalism, but it is not part of Skinner's argument. On the contrary, Skinner himself countenances use of "covert" data reports, and furthermore his pragmatic arguments against mentalism presuppose that mentalism is an empirical theory.[22]

Skinner treats his own psychological theory and the mentalistic alternative as rival empirical programs for studying human activity.[23] In formulating the theoretical issues in this manner, Skinner is closer, in point of philosophical presuppositions, to mentalistic opponents such as Charles Taylor than he is to classical behaviorists.[24] Skinner and classical behaviorists disagree metapsychologically, i.e. about the nature of empirical sentences and observation. In contrast, the dispute between Skinner and Taylor is primarily empirical, i.e. over the nature of what is observed.

In his book *The Explanation of Behavior,* Taylor rightly identified the controversy between teleologists and behaviorists as a question of what is to be the form of the most basic laws used to explain psychological phenomena. Recalling my earlier discussion of whether behaviorism's challenge to ordinary teleological usage should be adjudicated as a conceptual issue, or rather as an empirical issue; Taylor thinks that it is both. According to Taylor, these issues "touching as they do on the conceptual scheme of inquiry, are nevertheless empirical."[25] They are empirical in the sense that whether (or not) a given theoretical framework, say that of behaviorism or that of teleology, is judged to be valid is ultimately contingent on "whether laws of the type it prescribed are found to hold of and account for the phenomena."[26]

In assessing the linguistic critique of the impossibility of behaviorism, Taylor concluded that this a priori argument from ordinary language *against* behaviorism is no more fruitful than reductionistic philosophy's a priori argument *in support* of behaviorism. According to Taylor, both of these methods for adjudicating the behaviorism–mentalism dispute "purport to rule out one solution to the problem on the basis of more general considerations, leaving the other sole occupant of the field."[27] On the one hand, in the case of the ordinary language argument, the relevant "more general considerations" are *logical* in that the thesis of behaviorism "is reduced to absurdity by being shown to imply that our language is nonsensical."[28] On the other hand, in the reductionistic argument, the relevant "more general considerations" are *epistemological* in that the mentalistic thesis (that human activity is purposive) is shown to be empirically empty.

Addressing the mentalism-behaviorism question as a dispute between rival *empirical* theories required Taylor to redefine analytic philosophy's concept of "empirical" so that "teleological" theories were not logically excluded. In this regard, he argued for specific changes in the established conceptual scheme of science which would enable us to specify the theoretical dispute in psychology without biasing the outcome in favor of either competitor. Given Taylor's metapsychological proposals, neither theory could be ruled out a priori, by the definition of "empirical."[29]

In repudiating both the reductionistic paradigm and the ordinary language argument, Taylor rejected a purely a priori resolution of these issues; in effect moving toward a more pragmatic metapsychological position. By arguing that behaviorism and teleology are rival forms of empirical explanation, Taylor acknowledged that the displacement of the teleological concepts of ordinary psychological language is at least *conceivable*. Acknowledgement of this possibility undermines the program of linguistic critics of behaviorism such as Peters, Strawson, and Ryle. These philosophers assumed that if it could be shown that teleological concepts were basic to our ordinary conceptual scheme, then that was sufficient to establish the impossibility of exhaustive nonteleological accounts of human behavior.

Taylor's metapsychological proposals were motivated by a desire to argue that the ordinary teleological form of explanation is an empirically viable alternative to behaviorism. In conclusion, I'd like to again turn to the case for behaviorism, and briefly consider B. F. Skinner's specific metapsychological proposals. An adequate metapsychological paradigm would presumably include criteria for assessing whether a proposed modification in the (established) language of psychology is warranted. The reductionistic paradigm presupposed by classical behaviorism's proposals has been shown to be an inadequate basis for defending such proposals. Skinner, who is unquestionably aware of the inadequacy of a reductionistic defense of behaviorism, raised the question of a (sound) metapsychological basis for adjudicating theoretical proposals in his recent book, *About Behaviorism.* Addressing the behaviorism-mentalism dispute, he asked, "How are we to decide between these two views?" He then proceeded to argue for his own proposals on the basis of criteria such as simplicity, use in control, use in prediction, usefulness of the "stopping place" in causal accounts, and the relation of psychology to other sciences.[30]

Although Skinner doesn't himself explain the nature of the philosophical criteria being used, his arguments are clearly pragmatic. A pragmatic decision between competing psychological languages depends on an explication of the goals being served by engaging in such discourse. Skinner treats the above listed criteria as the goals of using psychological discourse and argues that the consequences of our using behavioristic language are better than the consequences of our using the established "mentalistic" language. The basic strategy in Skinner's arguments for modifying ordinary psychological discourse (or for that matter, any specified social practice) is this: First, what are the goals of the practice (or set of practices)? This question becomes "What are the (past) reinforcers of the behavior of those engaged in the practice?" This translation provides Skinner with the cutting edge required to make the distinction between what is *said* to be the goals of the practice (perhaps by the practitioners themselves) and what *in fact* are its goals (i.e., between first person reports of "intended consequences" and reports of the "reinforcing modifications" which the practice is in fact contingent upon). Then, given an explication of the goals to be achieved by engaging in the practice, Skinner can argue that adopting behavioristic language is more productive of those ends than is the established manner of engaging in the practice.[31]

To summarize, it has been shown that pragmatic assumptions offer a logical framework for defending behavioristic positions like Skinners. According to pragmatic philosophy of science there is no a priori impossibility in arguing that the basic concepts of a realm of ordinary discourse ought to be displaced. Rather, the presumption is that empirical discoveries and new theoretical developments might well provide us with grounds for redrawing even our most fundamental conceptual distinctions. Thus even if we grant the linguistic argument about the nonreducibility of ordinary teleological concepts to behavioristic language, it is still possible to raise meta-level questions about the ordinary language, and to argue for modifying its ontological presuppositions. Given that pragmatism provides an argument for adjudicating such questions, that line of argument will have to be taken into account in philosophical criticism of behaviorism.

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1. The basic argument contained in this paper was worked out in my dissertation, *An Analysis of Selected Critical Literature on B. F. Skinner and Its Relation to Education* (Ohio State University, 1975) and appeared in a related article, "Philosophical Criticism of Behaviorism: An Analysis", *Behaviorism* 5, 4 (spring, 1977); see that article for a more extensive treatment of the metapsychological issues addressed in the present paper.

2. W. V. Quine is in the forefront of this movement. For a clear analysis of the issues see his *From a Logical Point of View* (New York: Harper & Row, Publishers, 1961), especially chapter 2, "Two Dogmas of Empiricism."

3. The confusion about the content of Skinner's proposals is of course but one side of the problem. The primary thrust of this paper is to show that fruitful debate is also hindered by a lack of philosophical sophistication about how the issues can validly be resolved. For example, many psychologists who are sympathetic to Skinner's proposals do a very poor job of supporting them because they continue to argue from the presuppositions of logical positivism rather than from those of pragmatism. This lack of sophistication is doubly unfortunate since the positivistic program is demonstrably unsatisfactory (having been successfully critiqued by both linguistic philosophy and pragmatism) and since pragmatism does provide a viable basis for arguing the case for behaviorism.

4. Clark Hull, *Principles of Behavior* (New York: Appleton-Century-Corfts, 1966), p. 25.

5. Rudolf Carnap, *Logical Foundation of the Unity of Science*, Vol. 1 (Chicago: University of Chicago Press, 1938), p. 52.

6. Given the atomistic epistemological presuppositions of classical behaviorism's effort to provide "empirically adequate" translations of ordinary teleological language, the issue of whether such translations were logically (or empirically) possible simply did not arise. If we grant that the world really is the way atomistic metaphysics conceives it to be, then trivially it would follow that "ideally" our language and knowledge would con-

form to a reductionist paradigm. Challenging such atomistic presuppositions was an important aspect of linguistic philosophy's critique of classical behavioral analysis.

7. The function which ordinary language came to fill in philosophical debate required the use of new lines of questioning known as "conceptual analysis." Furthermore use of this new mode of analysis presupposed a revised conception of what constitutes good philosophical argument.

8. See P. F. Strawson, "Construction and Analysis," in *The Revolution in Philosophy*, ed., A. J. Ayer (London: Macmillan & Co., 1956).

9. P. F. Strawson, *Individuals: An Essay in Descriptive Metaphysics* (London: Methuen, 1959), p. 10.

10. Ibid.

11. For example, see Gilbert Ryle's *The Concept of Mind*, (New York: Barnes & Noble, 1949), especially the final chapter.

12. R. S. Peters, *The Concept of Motivation* (London: Routledge & Kegan Paul, 1958), p. 156.

13. See Thomas Green's analysis of "category mistakes" in *The Activities of Teaching* (New York: McGraw Hill, Inc., 1971), p. 135-144.

14. Ryle selects a meaningful statement employing "physical activity" terms such as "He hit the punching bag for two minutes, then stopped and started again after a breather," and substitutes "mental activity" terms such as "know." The result is said to show that "the verbs 'know,' 'possess,' and 'aspire' do not behave like the verbs 'run,' 'wake-up,' or 'tingle': we cannot say 'he knew so and so for two minutes, then stopped and started again after a breather.'" (Ryle, p. 116).

15. For example, Newton's physics, Aristotle's physics, or Einstein's physics are regarded as in some sense disconfirmable on the basis of empirical evidence.

16. See B. F. Skinner, *About Behaviorism* (New York: Alfred A. Knopf, 1974), pp. 214-217.

17. Ibid.

18. See B. Munsey Mapel, "Philosophical Criticism of Behaviorism: An Analysis," in *Behaviorism*, Vol 5, No. 1, 1977. p. 23-28; and *An Analysis of Selected Critical Literature on B. F. Skinner and Its Relation to Education*, dissertation, Ohio State University, 1975.

19. Skinner, *About Behaviorism*, p. 14.

10. Ibid., p. 107.

21. Ibid., p. 14.

22. "Mentalism kept attention away from the external antecedent events which might have explained behavior, by seeming to supply an alternative explanation. Methodological behaviorism did just the reverse: by dealing exclusively with external antecedent events it turned attention away from self-observation and self-knowledge. Radical behaviorism restores some kind of balance. It does not insist upon truth by agreement and can therefore consider events taking place in the private world within the skin. It does not call these events unobservable, and it does not dismiss them as subjective. It simply questions the nature of the object observed and the reliability of the observation." (Skinner, *About Behaviorism*, p. 14).

23. Skinner, *About Behaviorism*, p. 214.

24. See Charles Taylor, *The Explanation of Behavior* (London: Routledge & Kegan Paul, 1970).

25. Ibid., p. 101.

26. Ibid.

27. Ibid., p. 100. See Norman Malcolm's "The Conceivability of Mechanism" for Malcolm's attack on Taylor's view of this, in *The Philosophical Review* 77:1 (1968).

28. Ibid., p. 100.

29. Reductionistic philosophy of science had defined scientific concepts in such a way that teleological accounts were not scientific accounts. Taylor's strategy can be summarized as follows. His first argument is directed at undermining the positivistic philosophy of science which had defined "empirical" and "teleological" in such a way that to be teleological entailed being nonempirical. Then Taylor explicated ordinary teleological

discourse to show that teleological explanations are "empirical," given an ordinary sense of such terms as "observe" and "cause." Then given that teleological concepts are "empirical" (given the proposed revisions in the conceptual scheme of science) he concludes that there is no logical impossibility in arriving at an empirical understanding of human activity. Finally, Taylor argues on empirical grounds that behaviorism is inadequate.

30. B. F. Skinner, *About Behaviorism*, pp. 214-217.

31. For example, a rational decision among competing scientific accounts depends on an analysis of the goals of science. And describing the goals of scientific practice requires discovering which of the modifications in the environment resulting from scientific activity have in fact reinforced the behavior of scientists. For example, given that successful prediction is found to have reinforced scientific behavior, then successful prediction would be said to be a goal of science.

THE INTERACTIVE UNIVERSE AND THE LIMITS OF EDUCATIONAL RESEARCH

D.C. Phillips
Stanford University

INTRODUCTION

In the relevant literature, there is little agreement about the diagnosis, and prognosis, of the state-of-health of educational research. Prestigious journals over the last decade or so are replete with articles pointing to one or another symptom of disease; and there are numerous books highlighting the defects of the methodologies that educational researchers share with their colleagues across the social sciences. On the other hand, there are works which advertise that if the Millenium is not yet quite with us, it is not too far away. The unwary reader is likely to be reduced to a semi-schizoid condition—the gloom engendered by Arthur Coladarci's early article, the recent paper by Henry M. Levin, the essays reprinted in the volume *The Significance Test Controversy*, and the philosophical critique of the foundations of modern behavioral science by Harré and Secord in their *The Explanation of Social Behavior* (to cite a small sample),[1] is countered by the at least slight optimism engendered by browsing in the works of Skinner or of Donald Campbell, or by studying the recent paper by Philip Jackson and Sara Kieslar, and N.L. Gage's *The Scientific Basis of the Art of Teaching.*[2] Indeed, in an interesting passage Gage notes that his own optimism about the fruitfulness of educational research "is not universally shared. Some writers regard such optimism as vacuous and blind." And a little later he adds,

> Nonexperimenters can more readily afford pessimism. Almost by definition experimenters must be optimists. To try a new treatment, a new independent variable, requires and creates hope. Mere observers can indulge themselves in an above-the-battle contemplation of what seems like human folly.[3]

Gage discusses only briefly one influential and relatively pessimistic line of argument that has recently emerged within the research community itself, although its progenitors lean more toward the theoretical pole rather than being entirely devoted to "hands-on" experimental research. It is to this new view of the limits of scientific behavioral research that the discussion will turn.

THE INTERACTIVE WORLD

In his presidential address to the American Psychological Association in 1957, which was titled "The Two Disciplines of Scientific Psychology" and has since won the status of a classic,[4] Lee J. Cronbach argued that it was simplistic to look for straightforward effects, such as which of several possible treatments will maximize a particular response of a certain type of organism. Members of a species have individual differences, and so some individuals may have their response maximized by treatment A, but others by treatment B or C. (Thus, some children in a classroom might respond well to one particular teaching method, but other members of the class—with different individual characteristics—might respond more to other methods.) In other words, aptitude or ability of individuals interacts with the treatments, and Cronbach called for more research aimed at identifying these aptitude-treatment-interactions (ATI).

In 1974, when responding to the Distinguished Scientific Contribution Award of the same Association, Cronbach reviewed the great volume of work that had been done over the intervening years.[5] Interaction effects, which are often of considerable magnitude, have been identified in a variety of contexts; furthermore, these effects are themselves interactive, in other words a particular ATI may be affected by other variables or individual differences, such as socio-economic status. Finally, to make matters even more complex, interactive effects often have time as a significant variable—a generalization that was true in 1940 may not hold in 1960, and by 1980 the picture may have changed yet again. Thus, the immunity of a population to disease may change over time, or the aspirations of children of a given socio-economic class may shift over several decades, and parenting behavior may alter—and all these things are involved in complex networks of interactions that will, perforce, undergo change.

A colorful analogy may be helpful; the interactive psychological world envisioned by Cronbach can be modelled by a concentration or prison camp on a remote island. Suppose that the inmates are being systematically deprived of sufficient quantities of drinking water. This treatment will not affect everyone in the same manner—there will be interactive effects. Thus, there may well be a sex difference, and women might respond to the dehydration in a different way than men (they might be more, or less, resistant to thirst). However, not all the men and all the women will respond in the same way. There is likely to be a further interaction with age; thus young women may have a different resistance than the older women, who will in turn differ from younger and older men. Then there will be further interactions—body weight (obese people will interact with the treatment differently to slimmer folk); state of health; and perhaps even I.Q. (smarter individuals may figure out ways of cutting down their need for water, for example by not jogging around the camp). Thus, intelligent, slim, healthy, young women will react to the treatment differently from....

Imagine, as the final complexity in this horrendous psychological parable, that the island community with its scarce water resources is isolated for a long period of time. Characteristics of the prisoners may change over time—weaker individuals will succumb, and the older inhabitants twenty years down the line may have quite different characteristics compared to the older inhabitants of the present day, and so interactive effects true of the present senior citizens will not be true of those of the future: the networks of interactions will have changed. Truly, Descartes' malicious demon could not have engineered a nastier situation for the behavioral scientist to deal with.

THE LIMITS IMPOSED BY INTERACTIONS

In an interactive world such as this, to pin down a stock of generalizations applicable to the contemporary social scene is no easy matter. Even with only a few relevant variables to consider in some relatively simple problem area, a large number of interactive effects of considerable magnitude are possible, and it would take an impossibly large experiment—far exceeding the limits of any conceivable resources a behavioral scientist could command—to gather the relevant data. (The present political climate in the U.S. makes it unlikely that many tens of thousands of children will be removed from their homes and given to researchers to assign to various controlled conditions for relatively long periods of time; on the other hand, the army might be willing to provide the several regiments necessary to deal with the logistics of such an experiment).

In one particularly significant passage, Cronbach outlines his conclusions:

> Our troubles do not arise because human events are in principle unlawful; man and his creations *are* part of the natural world. The trouble as I see it, is that we cannot store up generalizations and constructs for ultimate assembly into a network. It is as if we needed a gross of dry cells to power an engine, and could only make one a month. The energy would leak out of the first cells before we had half the battery completed. So with the potency of our generalizations. If the effect of a treatment changes over a few decades, that inconsistency is an effect—a Treatment x Decade interaction that must itself be regulated by whatever laws there be. Such interactions frustrate any would-be phenomenal picture he tries to explain.[6]

It appears, then, that Cronbach is asserting that although there may be laws underlying social phenomena, we cannot realistically hope to discover them.

> A general statement can be highly accurate only if it specifies interactive effects that it takes a large amount of data to pin down. Some effects in the network will change in form, in a span of one or two generations, even before enough qualifying clauses have been added to describe the effect accurately.[7]

The best that can be hoped for is to "pin down the contemporary facts," and even this will be exceedingly difficult. In terms of our parable, the behavioral scientist can attempt to describe the present complex patterns of interactive effects which influence the dehydration of the individual prisoners, but the patterns will be changing even as the scientist studies them, so he will be condemned to the labors of Sisyphus and will constantly be repeating his work without making significant headway.

Gage identifies this as a "melancholy" view, and he spells-out what it means when applied to research on classrooms: the perpetrators of this view (i.e. Cronbach and his co-workers)

> hold that the complexities of teaching have been shown to be intractable. Any hope of mastering these complexities is forlorn-doomed to founder in a morass of higher-and-higher-order interactions, historical relativisms that make today's truth tomorrow's falsehood, laws of learning that fail to hold, and profound misconceptions of the character of what the behavioral sciences can properly aspire to. Thus, we are told, the best we can hope for is not prediction and control but mere temporary understanding.[8]

And Richard Snow, Cronbach's co-worker in the ATI field, reported in the *Educational Researcher* that after he had led a colloquium on ATI findings, "a well-known learning theorist remarked... 'If you're right, I quit, because this makes it all too complicated—theory becomes impossible!'"[9]

REVAMPING THE ROLE OF THE SOCIAL SCIENTIST, AND OF THE NATURE OF THEORY

The closing section of Cronbach's 1974 paper was titled "Realizable Aspirations for Social Inquiry," and in it he expressed the view that has been alluded to in the preceding discussion, namely, that social scientists can realistically hope only to "pin down the contemporary facts" in "each generation," and to provide a modicum of insight and wisdom on a par with that provided by "the humanistic scholar and the artist."[10] The narrow indentification of social science with natural science is inappropriate—a point that emerges even more strongly in Cronbach's writings since 1974 on the role of the educational evaluator.

It has been common to treat evaluators as a specialist group of scientific researchers; indeed, the new Society to which Cronbach made some revealing remarks in 1976 had called itself the "Evaluation Research Society." Cronbach did not mince words:

> Science is only part of the story and, I would say, a subordinate part. If evaluation is not primarily a scientific activity, what is it? It is first and foremost a political activity, a function performed within a social system.[11]

And the function of evaluators is to make "the system function better." Social reforms, social programs, are put into operation in particular sites which may differ radically from each other, and where the conditions may be undergoing rapid change. (Once again the island prison camp comes to mind). Under these circumstances it is a waste of effort, not to mention other resources, to worry unduly about internal validity or even perhaps the refinement of research designs. Faced with such shifting conditions, we should try to learn as much as we can that will be of use in planning further social interventions. Doing social research (or evaluation work) is not like doing laboratory work in the natural sciences.

Richard Snow, who co-authored with Cronbach the mammoth volume *Aptitudes and Instructional Methods,*[12] does not fully endorse the latter's conclusions about the implications of ATI research for our conception of the possibilities of social science, but his remarks tend in the same direction. As Snow put it in his paper in the *Educational Researcher,* "ATI does not make theory impossible; it makes general theory impossible,"[13] and he would emphasize the work "general." The researcher interested in the field of instruction should concentrate on detailed description of "specific instructional situations" and "specific groups of people." Out of this work there might emerge theories that are quite specific with respect to time and place. In the very long term, a theorist may be able to "cluster" specific theories of this type and derive "more abstract notions." But Snow stressed that "there would never be a general, top-down instructional theory, created in academia and applicable, or inapplicable, in particular schools."[14]

WHY MELANCHOLY IS UNCALLED-FOR

It must be asserted at the outset that the arguments of Cronbach and Snow are not convincing. Several lines of thought can be put forward to counter their "melancholy position."

(a) In the first place, although the label "aptitude-treatment-interactions" is new, the actual picture of reality presented by Cronbach and Snow does not differ in essentials from the picture that has emerged over the centuries in the field of physical science. Here, too, there are interactions—pressure and volume interact to affect the behavior of a gas, but temperature in turn is another interacting factor, and so is the initial mass of the gas and its purity. Futhermore, depending upon the precise chemical nature of the gas (another interacting factor), some surprising events may occur at specific temperatures and pressures—some gases condense into liquids while others sublimate directinto solids.

The difference between the social and physical domains is merely that the *types* of factors that interact are different, although, of course, the "merely" is not entirely without significance. With respect to gases, the interacting factors are physical; with respect to people, interactions are not confined to the physical realm—there is more at work than such things as temperature or climatic factors, age, and body weight. Creativity, intelligence, motivation, previous socialization, state of mental health, cognitive repertoire, and so on, are also possible sources of interactive effects. Furthermore, humans are role-playing and rule following creatures, while presumably gases neither consciously set out to follow Boyle's Law nor debate which role is appropriate for them in a given experimental setting.

Now, many philosophers have held that such differences as these between the social and physical realms are so great as to render it impossible to produce social science that is in any sense parallel or analogous to physical science. Peter Winch is probably the best known recent figure in this tradition.[15] Others who also emphasize these differences between the social and physical realms do not conclude that social science is impossible; rather, social science must take different directions to physical science, but it can be science nonetheless. The recent book by Harré and Secord falls into this category.[16]

The argument offered by Cronbach and Snow is entirely different. It is not so much the *nature of the factors* operating in the social realm that makes impossible the attainment of scientific theory, it is—in main—the fact that these entities are *interacting*. And, as argued above, it would seem that interactive effects have not prevented the development of theory in other branches of science; neither Boyle nor Newton knew all the interactions in their respective fields before they successfully theorized. But there is one caveat that should be entered here. It is obvious that Cronbach places a great deal of emphasis upon the fact that one important interacting factor in the social sciences is *time*; as he puts it, generalizations decay. But time is also a variable that effects certain processes in the physical world, and biological phenomena (both in individuals and in populations or species) change over time—matters with which natural scientists have been able to cope satisfactorily.

There is an interesting variant of this line of argument concerning interactions in physical science that was developed by Karl Popper in his *Poverty of Historicism*, and it recently has been revived by N.L. Gage in his controversy with Cronbach and Snow.[17] Processes in the natural world in essence are arenas where a host of forces interact, and scientists cannot make accurate productions because of the ensuing complexities. But this does not mean that theories are either unattainable, or useless when they are found. Popper uses the example of a storm shaking a tree and causing an apple to fall and bruise on the ground; Gage uses an autumn leaf wafting to the ground. In both cases there are gravitational effects, air resistance, wind currents, biochemical actions in the plants that determined when the apple and leaf would fall, and so on. The situation in social science research undoubtedly is of similar complexity.

(b) The main source of trouble for Cronbach and Snow is that they take an unduly inductivist or Baconian position concerning the nature of scientific inquiry, which is somewhat surprising for it is not so obvious in other of their writings. Cronbach clearly paints a picture of the social or behavioral scientist collecting masses of relevant facts and *then* settling down to produce a theory. The scientist, he stated in a quotation given earlier, attempts to "store up" facts about the contemporary scene "for ultimate assembly into a network." His analogy of filling a room with dry cells for ultimate use in working an engine is a powerful way of driving this account home for his readers. Given this inductivist account of science, it is indeed a serious problem if the facts that are being stockpiled for use in latter theorizing start to degenerate or "decay" because of time being a further interacting factor.

The inductivist view, however, runs counter to the "prevailing view" in philosophy of science. As Karl Popper put it in his autobiography, "we never argue from facts to theories, unless by way of refutation or falsification." Popper goes on to label this mistaken view as "Lamarckian," for it essentially stresses "*instruction* by the environment." His own view is, he claims, Darwinian in that it stresses "selection by the environment":

> From the point of view of this methodology, we start our investigation with *problems*. We always find ourselves in a certain problem situation; and we choose a problem which we hope we may be able to solve. The solution, always tentative, consists in a theory, a hypothesis, a conjecture.[18]

This conjecture is tested: relevant data are collected, resulting in either refutation, modification, or (if the test is passed) slightly less tentative acceptance of the original conjecture.

Would, then, acceptance of a Popperian (and "Darwinian") approach to theory construction and abandonment of the Baconian one, open an escape route from the melancholy position described by Cronbach and Snow? Let us return once more to the "island paradise" described earlier.

If a scientist were to be sent to study the concentration camp, she would be faced by Cronbach's and Snow's problem--her descriptive generalizations would "decay" while she was going about collecting others. However, it would not be long before she obtained enough of a sense of conditions on the island to form some hypothesis–such as, that the hot and dry conditions favor survival of prisoners of a certain body type. This could be tested, and exceptions noted and investigated further. More refined hypotheses might emerge–even hypotheses about the direction of change in the prison population over time–and these could then be tested.

It can be argued that Cronbach's original dilemma concerning the impossibly large experiments that would need to be carried out to pin down ATI in the social domain only arises if the scientist has no hypotheses. If all theoretical possibilities have equal probability, then all have to be investigated. Thus all relevant data has to be assembled, and of course the effort required undoubtedly would be mammoth. But when the experimenter has guidance from hypotheses, then matters are greatly simplified. The scientist might speculate along these lines: "The island is hot and dry. These conditions will favor survival of younger people rather than older and frailer prisoners; and fat prisoners will fare worse than those with relatively low body weight. And, of course, clever prisoners may hit on good survival strategies, but a clever, fact, old prisoner would have to be *really* smart to thrive under these conditions." Following Popper, the scientist could set out not to "prove" or "verify" these predictions but to *refute* them. Complex experiments would not need to be carried out, but rather the hypotheses under investigation would give guidance as to what data it would be appropriate to gather. Thus, old prisoners, and fat prisoners, could be sought out; or death statistics could be investigated to see whether proportionally more prisoners in these categories had succumbed. The Cronbach-Snow problem is avoided; Popperian or Darwinian emphasis on refutation of hypotheses has avoided the pitfalls of Baconian or Lamarckian inductivism.[19]

The point is central, and it is worth making somewhat more rigorously. Suppose there are, in a simplified social setting, only five interacting factors which will be labeled A through E. Furthermore, at a given time t^1, each of these factors can have any one of three values, signified by 1, 2, or 3. Thus there is A1, A2, A3, B1, B2,.... Even with only five factors, the number of possible interactions is large: 3^5 or 243 if *all* five factors must be involved in any interaction (A1, B1, C1, D1, E1; or A2, B1, C1, D1, E1; or A2, B2, C1, D1, E1; and so on).

Now, if an experimenter has a neutral attitude toward all of these possibilities, that is, if all are regarded as equally likely to occur and the experimenter refrains from hypothesizing, then a large experiment would have to be run to determine the specific interactions which do occur out of these 243 possibilities. (In measurement jargon, a factorial design would be appropriate). However, such a procedure would take time, and in an interactive universe by time t^2 it is likely that the nature of the interactions will have changed–more or less factors now may be involved, or the factors may be spread over a greater range of values, and so forth. The atheoretical researcher would then have to run another large experiment at time t^2, and so on *ad infinitum*.

However, suppose the researcher hypothesized early in the research, and came to the tentative conclusion that the only interaction likely to occur out of the 243 possibilities was, say, A5, B4, C3, D2, E1. Furthermore, suppose the researcher also hyopthesized about the likely changes in this interaction over time. A relatively simple study would suffice to check all this (if a factorial design were used, many cells could be left empty, and matters would be simplified further if an absolute criterion were suggested by the hypothesis under test). If it was found that A5, B4, C3, D2, E1 did not occur, but instead the interaction was A5, B4, C3, D2, E2, then the original hypothesis would be refuted and the researcher would have learned an important lesson. One or two further hypothesizing and testing cycles might be sufficient to allow the development of a theory or hypothesis that survives serious testing.[20] All of this bears out the worth of the two mottos enunciated by Karl Popper to the effect that we learn from our mistakes, and the important thing is to make our mistakes as rapidly as possible.

But there is one other aspect of the foregoing discussion which needs to be underscored: the researcher needs to produce reasonable hypotheses or theories. And it is here that one of the oft-heard criticisms of educational research floats to the surface—such research is carried out, if not in a theoretical vacuum, at least in an environment where the theories are extremely weak. The way to overcome this is to place renewed emphasis on the importance of good theorizing, whereas Cronbach's ATI paper would seem to encourage researchers to further neglect this already weakened aspect of research.[21]

(c) The preceding discussion leads on to another criticism of the Cronbachian argument that if theories are to be found, they will apply only to very specific contexts—general theory will be beyond our grasp because of the multitude of interactions, and because, in particular, time is an interacting factor. To take an example, a theory about the behavior of children of a certain social background and ability on a particular task in a particular school at a particular time cannot be expected to hold true for other children with other abilities in other schools and on other occasions.

At one level this is true. Specific regularities may not hold in new sites where the particulars are different. But this is no reason for concluding either that theory at some more general level is not possible (Snow acknowledges that the *possibility* exists), or that such a general theory will only emerge *after* the specific or particular theories have been developed.

Evolutionary biology is an instructive example here. Charles Darwin was faced with a situation a great deal more complex than that dealt with by the researcher on the fictitious island prison camp; he was studying, in effect, the class of all living organisms and their interactions with the environment.

Each particular species has a host of characteristics, and of course individual members differ with respect to each other; and within a species, and across species, there are an enormous number of interactive affects with the environment. Furthermore, as indicated by the fossil record, both the characteristics of living things, and the nature of their interactions with their environments, have changed dramatically over time. Nevertheless, without waiting for the full set of generalizations applicable to specific members of specific species in specific environments at specific times, Darwin actively hypothesized on the basis of incomplete knowledge, and came up with a successful general theory. And it should be noted that his theory accounted for the alteration of species over time!

The process that worked so well for Darwin should at least be tried in education. Researchers should take heart from William James' remarks about the general who never fought a battle for fear of injuring his troops:

> Not so are victories either over enemies or over nature gained. Our errors are surely not such awfully solemn things. In a world where we are so certain to incur them in spite of our caution, a certain lightness of heart seems healthier than this excessive nervousness on their behalf.[22]

And, as Popper has shown, it is only by making errors in their hypotheses that researchers can hope to advance.[23]

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1. Arthur Coladarci, "Toward More Rigorous Educational Research," *Harvard Educational Review* 30, (1960); Henry M. Levin, "Why Isn't Educational Research More Useful?", in *Prospects* 8, 2 (1978); D. E. Morrison and R. E. Henkel (eds.), *The Significance Test Controversy* (Chicago: Aldine, 1970); R. Harré and P.F. Secord, *The Explanation of Social Behavior* (N.J., Littlefield: Adams, 1973).

2. B.F. Skinner, *Science and Human Behavior* (N.Y., Free Press, 1953); Donald Campbell, "Reforms as Experiments." *American Psychologist* 24 (1969); Philip Jackson and Sara Kiesler, "Fundamental Research and Education," *Educational Researcher* 6, 8 (Sept. 77); N.L. Gage, *The Scientific Basis of the Art of Teaching* (N.Y.: Teachers College Press, 1978).

3. N. L. Gage, op. cit., p. 91.

4. Lee J. Cronbach, "Beyond the Two Disciplines of Scientific Psychology." *The American Psychologist* 12, 11 (Nov. 1957).

5. Lee J. Cronbach, "Beyond the Two Disciplines of Scientific Psychology." *The American Psychologist* 30, 2 (Feb. 1975).

6. Ibid., p. 123

7. Ibid., p. 126

8. N. L. Gage, op. cit., p. 91.

9. Richard E. Snow, "Individual Differences and Instructional Theory," *Educational Researcher* 6, 10 (Nov. 1977) :12.

10. Lee J. Cronbach, "Beyond the Two Disciplines...," *op. cit.*, p. 126.

11. Lee J. Cronbach, "Remarks to the New Society," *Evaluation Research Society Newsletter* I, 1 (April 1977) :1.

12. Lee J. Cronbach and Richard E. Snow, *Aptitudes and Instructional Methods* (N.Y.: Irvington, 1977).

13. Richard E. Snow, op. cit., p. 12

14. Ibid.

15. Peter Winch, *The Idea of a Social Science* (London: Routledge & Kegan Paul, 1958).

16. R. Harré and Secord, op. cit.

17. Karl Popper, *The Poverty of Historicism* (London: Routledge, 1969), p. 177; N.L. Gage, "Paradigms Found: New Prospects for Educational Research," paper read at APA Conference, Toronto, 1978.

18. Karl Popper, *Unended Quest* (Illinois: Open Court, 1976), p. 86.

19. This discussion, and the material that follows, grossly oversimplifies the process of hypothesis-testing in the social sciences in that it does not mention the problems introduced by the use of statistical methods and by the existence of probabilistic generalizations. It is hoped that the simplified discussion still makes a valid point against the Cronbach-Snow position.

20. The affluent reader can purchase the board game "Clue," the successful playing of which seems to depend upon adopting the hypothesizing and testing cycle.

21. Here Richard Snow differs somewhat from Cronbach; he anticipates that theory *might* eventually be forthcoming, but when and if it comes it will be "from bottom up."

22. William James, "The Will to Believe," reprinted in *Essays on Faith and Morals* (Cleveland and N.Y.: Meridian Books, 1962), p. 50.

23. I have profited from numerous discussions of these themes over the past year with Jennie Nicolayev. Marcia Linn has given valuable comments on an earlier draft, as have N.L. Gage, David King, and Richard E. Snow.

RESPONSE TO PHILLIPS

Hollibert E. Phillips
Walla Walla College

For some reason I cannot quite account for, Professor Phillips' paper conjures up images of ancient siege warfare, battering-rams and all—Cronbach, Snow, and Winch and the rest, high up on the battlements, relaxed and defiant; Phillips with reinforcements, drawn it appears, from Popper's cohorts, plying his rams and muttering imprecations at the fortifications.

But, enough of this conjuring. Professor Phillips commences his, in my opinion, very important paper by observing that "in the relevant literature, there is little agreement about the diagnosis, and prognosis, of the state-of-health of educational research." With the aid of a partial roll call, he goes on to identify two opposing forces (ideologies?)—one consisting of an influential and relative-pessimistic bunch with a "new view of the limits of scientific behavioral research," the other consisting of optimists, probably millennial, with rose-colored lenses. Phillips' essay is meant to be an engagement of the former.

The main point at issue is whether or not the very notion of ATIs—Apititude-Treatment Interactions—rules out the possibility of nomothetic generalizations or theory. Cronbach's and Snow's position is unequivocal. "Once we attend to interactions," they reason, "we enter a hall of mirrors that extends to infinity... not... because human events are in principle unlawful... [but because] we cannot store up generalizations and constructs for ultimate assembly into a network."[1] Snow, in a similar vein, contends that general, top-down, "instructional theory is a holy grail."[2]

Phillips sets out to counter this "melancholy position" by attacking on three fronts. On front one, he argues that the picture of reality presented by Cronbach and Snow "does not differ in essentials" from that which has so far chacterized the physical sciences. On front two, he faults their logic as being "unduly inductivist concerning the nature of scientific inquiry." And on front three, with less apparent courage, he contends that, exceptions notwithstanding, there "is no reason for concluding either that theory at some more general level is not possible, or that such a general theory will only emerge *after* the specific or particular theories have been developed."

I should now like to show Professor Phillips' position to be decidedly weak on all three fronts and for distinctly different reasons.

The crux and conclusion of his first argument, we would recall, is that the picture of reality presented by Cronbach and Snow "does not differ in essentials" from that which has so far characterized the physical sciences. But the manner of attempting to support this claim involves some, I dare say, very faulty logic, as I shall proceed to show. The proposition "A does not differ in essentials from B" is, by obversion, equivalent to the proposition "A is essentially like B." This equivalence Professor Phillips recognizes, and it is this equivalence that constitutes the burden of the analogy he is at pains to make. However, and this is crucial, the resultant proposition "A is essentially like B" is not logically equivalent to the proposition "A is like B." The former and stronger claim entails the latter and weaker claim, but not the other way around. A dog is like a wolf, but a dog is not essentially like a wolf. Establishing likeness is quite a different thing from establishing essential likeness, in the unequivocal sense above. While the illustrative stuff of Professor Phillips' analogy does indeed show likeness, it fails entirely to show *essential likeness.* Once we have established essential likeness in the unequivocal sense above, we have established likeness, but merely to have established likeness is not to have established essential likeness. Hence, Phillips' conclusion is left unsupported.

Further, given that Cronbach and Snow speak expressly in the context of human interactions, I am not sure that it can fairly be concluded that the nomothetic theory they hold to be impossible in the social sciences applies by parity of reasoning to the physical sciences as well. I do not think, moreover, given their definition of aptitude as "any characteristic of the person that affects his response to the treatment,"[3] that it is fair to contend that Cronbach and Snow are concerned with the fact of interaction, as Phillips argues, rather than with the nature of interactions.

I must be brief on the second and third fronts.

First, scribal errors aside, it is, in my opinion, mistaken, if not misleading, to fault the inductivism of Cronbach and Snow—if inductivism there is—on the premise that the inductivist view runs counter to the prevailing view of the philosophy of science, unless by "the prevailing view of the philosophy of science," is meant Popper's view of the philosophy of science; for Nelson Goodman, for example, who is, I think, as much alive as Popper is, does not share this view.[4] Further, Popper's sense of hypothesis or theory or hunch or conjecture—call it what you will—is more an astringent to unreflective thinking about the nature of particulars and universals than it is a bona fide refutation of inductive logic. Of this offence, Cronbach and Snow are hardly guilty. At any rate, suffice it to say at this jucture, that equivocation on the terms "theory" and "hypothesis" has generated an extraordinarily impressive array of puzzles.

Secondly, and finally, and in regard to the encounter of the third kind. To the extent that Professor Phillips' position on the possibility of macrotheory in the social sciences rests on the analogy he presumes to exist between the social and physical sciences and upon the view he presents of induction, that position, I think, is in need of much repair.

I venture one concluding remark. The question of the possibility of a strictly nomothetic, top-down, as opposed to an essentially functional or in some sense pragmatic, theory in the social sciences addresses the perennially perplexing issue of certainty. The issue is at once logical and empirical, hence any answer that sacrifices its logic to its empiricism cannot be epistemologically satisfactory. It is with this recognition that I tend to concur with Mr. Cronbach's view.

My very deepest appreciation to Professor Phillips for providing me the occasion for involvement in an area that might otherwise have escaped, if not my notice, certainly my interest.

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1. See Richard E. Snow, "Individual Differences and Instructional Theory," *Educational Researcher*, vol. 6, no. 10, (Nov. 1977), p. 112; and Lee J. Cronbach, "Beyond the Two Disciplines of Scientific Psychology," *The American Psychologist* 30, 2 (February, 1975), 119, 123.

2. Richard E. Snow, op. cit., p. 15.

3. Lee J. Chronbach, op. cit., p. 116.

4. Karl Popper, *Unended Quest* (Glasgow: Fontana/Collins, 1976), pp. 147-48.

III

CONCURRENT SESSIONS

THE CONCEPT OF READING
(PART TWO: READING AS COMPREHENDING)

LeRoi B. Daniels
University of British Columbia

I. *INTRODUCTION*

The overall aim of three papers I am doing on reading is to show that the logic of the concept has been, and continues to be, fundamentally misconstrued by reading researchers and to offer an alternative view of its logic. In the first paper, "Reading as Saying," I argued that the term "reading" suffers from a very complex form of process-product ambiguity.[1] The ambiguity is complex because it has several origins. In his famous book, *The Concept of Mind,* Ryle discussed the so-called "task-achievement" relationship which holds between certain pairs of verbs, such as, for example, "run" and "win."[2] His point was to make it clear that such a pair of verbs refers not to two occurrences but to one occurrence and its upshot. While one member of such a pair refers to an event, the other refers to an outcome. Some words are used ambiguously, serving either as an occurrence or as an upshot word.[3] The term "reading" is ambiguous in this way. Sometimes it refers to the successful outcome of some things we have done; sometimes it refers to what we do to try to succeed. However, the upshot sense is basic. That some process has occurred which can appropriately be called a "reading process," that one has a (or some) reading skill(s), that an act of reading is proceeding, or that one has the ability to read can be determined only by some criteria of correctness. And reading involves, as we will see, a great variety of kinds of success.

A further complication arises from the fact that the task-achievement relationship is only one of several relationships between words, all of which fit the occurrence-upshot pattern. There is one major class of upshot words which White has aptly labelled "reception" words.[4] It is White's contention that reception concepts differ from achievement concepts in terms of what, logically, can produce them as upshots and, as a result of that difference, how one can (logically) characterize examples of each. Thus, while achievements may be produced by intentional events (tasks), receptions cannot be so produced. To put it another way, a reception cannot be the upshot of a task, although it may occur *after* a task, while achievements can be, but need not be, the upshot of a task. As a result, while the latter can involve the exercise of a skill, which can therefore be taught, practised, etc., the former cannot be the result only of the exercise of a skill. This means that talk of reading as a skill or series of skills to be developed by the pedagogy of practice is logically untenable. The most that schooling, practice, etc. can do for us, in terms of successful receptions like noticing, is to "put us in a condition to notice what we used to miss, people cannot be taught nor can they learn how to notice, as they can be taught how to detect."[5] The important successes in reading are receptions.

Finally, the upshots of reading are related to one another in a stratified manner. Several kinds of success are necessary prerequisites to success in Comprehension. These I call "reading as Saying." The successes involved are essentially successes in seeing and labelling. I was thus able to use the framework provided in Soltis' book on perception to analyze reading as Saying.[6] Comprehending itself involves a complex of kinds of success. And there are successes which, while dependent on Comprehension, go beyond it. These are reading as Thinking. Here I focus on the upshots of Comprehending.

Professor Black argues that we need to recognize four complex and interlocking but distinguishable systems of rules, the phonetic, lexical, grammatical and semantical, to understand the structure of a natural language.[7] Any adequate account of Comprehending will need to be based upon some analysis of the key features of these four systems. Likening them to the atomic structure of the physical world, he says that language is "a *particulate* system."[8] For reasons I will outline later, I do not believe that the semantical system is particulate in the way the other three clearly are. I therefore group the phonetic, lexical and grammatical systems as the "particulate systems" but will explicate the semantical system as a system which is manifested when the latter two particulate systems are used in accordance with two other systems of conventions which govern the ways grammatically-ordered words can be *used* to perform a variety of speech *acts*. My chief aim in this paper is to indicate how a proper framework for reading research and teaching must recognize the importance of these other two systems.

II. THE PARTICULATE SYSTEMS

As a theoretical system each particulate system comprises units and rules which permit organizing the units into larger units. The larger units in turn can be organized into still larger units in accordance with a different set of rules. Thus, any

> known language is constructed of ultimate particles ["phonemes"] subject to intricate rules for composition.....[The] combination of the linguistic particles occurs at two markedly different levels: a finite stock

> of discrete phonemes combine, more or less arbitrarily, into indefinitely many meaningful linguistic molecules [morphemes, words]; these in turn, morphologically assorted into "parts of speech," can combine into indefinitely many sentences, of endlessly varied forms.[9]

Not only, therefore, are natural languages particulate, they are also stratified. It is this stratification which makes Comprehending possible at several levels.

The possession of the interlocked systems also enables us to use our language in various ways, usually involving other people. Soliloquizing is parasitic. In the simplest standard linguistic situation there is a speaker and a hearer. The distinguishing feature of the linguistic link is convention. Both S and H must understand and adhere to a shared conventional system. That there are shared conventions is indicated by the reversibility of speaker-hearer roles and by the fact that emitted sounds can be wrong in a variety of ways. Thus, utilizing implicit conventions of the four systems, we would say, respectively, that "thrng" doesn't *sound like English*, "runicle" doesn't make sense, "heard horses the he" is ungrammatical and "he kicked his mind across the room" is either poetic or meaningless.

In my paper on Saying I have already explicated the kinds of success which lie behind or include adherence to the phonetic system—the recognition that certain allophones sound right and the ability to use allophones well enough that other speakers of the language can recognize them as allophones. But, in addition, a person must have some degree of competence with the lexical system. Words and the conventions for inflecting, deriving and compounding words combine to produce the "lexicon" of the language. A person who reads, using his competence with the lexical system, is operating at the lowest level of Comprehending. Even at this level, Comprehending is a complex undertaking. But, whatever the operation, the upshot is the same—matching the printed word to an element of one's vocabulary. Teachers, of course, use a variety of devices in efforts to improve children's abilities to comprehend at this level.

People who write about reading sometimes talk about "word blindness" but, so far as I know, not about "grammar blindness." Perhaps they should, for success in identifying words is not enough to fully succeed at Comprehending; one must also follow the larger grammatical pattern within which words are employed as elements. It is at this level that the uniqueness of human languages becomes apparent. Building on the finite phonetic base we are able to produce a very large lexical basis. The grammars of natural languages then enable us to create a panorama of sentential possibilities which is, as far as anyone can tell, unlimited. Having somehow learned a grammar and acquired a vocabulary, children can generate and follow sensible sentences neither they nor anyone else has ever spoken. Eventually, young readers must become as "creative" in following sentences as writers are in generating them.

Then reading is not matching a string of printed words to another string, but applying a highly sophisticated set of rules to an original product. It is not so much recognizing the string as an old friend in new guise as it is using our mastery of the so-called "deep structure" to discover what the string means. To recognize the grammar is not to succeed at Comprehending; Comprehending demands *using* the grammar as a clue to the meaning.

Of course, "meaning" has many meanings. And even after we have set aside those which are obviously not pertinent, we find it hardly less complex and certainly no clearer than the notions we use it to explicate. In spite of these problems it seems impossible to avoid it. We must seek to find a better way to understand the concept itself. The most promising lead here is in the theory of speech acts which has grown out of the Wittgensteinian dictum that we should regard language as a tool.[10] To this we now turn.

III. LANGUAGE ACTS

The crucial idea is that language is a system which we use to carry out certain actions. The "smallest linguistic unit that can be used to perform a complete action that is distinctively linguistic" is the sentence.[11] Thus although we more commonly talk about the meanings of words than we do about sentence meanings, speech act theory directs us to look first at language acts and at sentences. Consider then the variety of "events" which occur in a simple oral communication situation in which S makes some assertion to H.

(1) S utters sounds (S does a physical act)
(2) S does conventional acts
    (2.1) S says allophones
    (2.2) S says words
    (2.3) S says a sentence
    (2.4) S refers to some object and predicates some property of it
    (2.5) S asserts something
(3) S receives feedback while doing (1) and (2):
    (3.1) S understands what he says
    (3.2) S undergoes further effects as a result of (3.1)
(4) H pays attention to S
(5) H understands S
(6) H recognizes certain intentions of S
(7) H undergoes further effects as a result of (5) and (6)
(8) H does other things during and after S's utterance as a result of (5) and (6)

I italicized "events" earlier because, strictly speaking, none of the items under (2) is an event, nor are those under (3.1), (5) and (6). Rather, each is either an upshot of a type of act, or successful recognition of such an upshot. (Itself, of course, an upshot.) An important but subtle point is involved here. Item (1) is clearly an event; uttering sounds takes time. Thus, we can speak more or less quickly, start and stop speaking at particular times, and the utterance has a particular spatial location. But when one does what is included under (2) these are not *events* which occur separate from but simultaneously with (1); they are things we do *by doing* (1). They are related in the way that putting our signature on a contract is related to our agreeing to the terms of the contract. We can put this another way by saying that (1), (2.1), (2.2), (2.3), (2.4) and (2.5) are all separate *acts*, but only one event.[12] We distinguish one *act* from another on the basis that each has different identity criteria. We have already discussed some of these criteria (for 2.1, 2.2 and 2.3) and have seen that they are, respectively, phonetic, lexical and grammatical criteria. And we know that these different criteria are operating because, for example, we know that the same phonetic unit can occur in two different words or the same word can occur in two different sentences. When we perform a single physical act which conforms to all three of these types of criteria then we produce three different types of upshots. And when we read a sentence, precisely the same sort of thing goes on. Category (2) lists the kinds of conventional upshots which the speaker can produce *by making* the sounds under (1). And (3.1) and (5) consist of the successful recognition by S and H of those upshots. As a result, H also recognizes certain intentions of S, as we note in (6). The hearer or, as the case may be, the reader is able to have this variety of successes because he is competent in utilizing a variety of sets of conventions which he shares with S. Clearly, (1), (3) and (4) are events and each has its parallel in reading. No doubt each involves significant researchable questions of importance for reading researchers. Nevertheless, I shall ignore them here. When we listen to someone speak, and, once we are competent at Saying and Comprehending, we often find ourselves able to look for errors in reasoning, to look for unstated assumptions or to puzzle over the implications of what we hear or read. It is these which I have in mind under (8). These fall under reading as Thinking.

In view of my earlier comments on occurrence-upshot concepts, I take it as obvious that 2.1, 2.2 and 2.3 are upshots which result from uttering a series of sounds which follow the conventions, respectively, of the particulate systems. Because these and 2.4 and 2.5 result from acts performed with language, let us call acts intended to produce these upshots by conventional means "language acts" or "speech acts."

The status of (2.5) can be seen by contrasting it with (7). Philosophers, following Austin, speak of illocutionary and perlocutionary speech acts. To report, predict or request is to perform an illocutionary act; to deceive, distract or embarrass is to carry out a perlocutionary act.[13]

Perlocutionary acts are defined by the effects they produce in a hearer. Category (7) encompasses such effects. Of course, people can be embarrassed by acts or situations which are non-linguistic. But, as is indicated by the root, "locution," perlocutionary acts are *linguistic* acts which are done in order to, or which have the result of producing, effects of the types noted. Illocutionary acts also necessarily involve language. The key point I want to make is that even where a student has succeeded in applying all the other systems he may still fail to comprehend the sentence because he does not recognize what illocutionary acts are embodied in that sentence in that context. This cannot be achieved without clues from the other systems but, although necessary, success with them is not sufficient for comprehension. He must also succeed through understanding the conventions of illocutionary acts. In addition, illocutionary success is a necessary but not sufficient condition for reading as Thinking and for perlocutionary effects to occur.

Professor Searle has analyzed eight types of illocutionary act in terms of four types of rule or convention.[14] This enables us to state some of the conditions necessary for an utterance to be a standard case of an illocutionary act of a certain type. To his conditions I have added a further condition to the effect that the phonetic, lexical and grammatical systems have been properly used. I call this the syntactic condition. Here is a summary of such conditions for two illocutionary acts, asserting and greeting.[15]

Types of Conditions	*S asserts proposition P to H*	*S greets H*
1. Syntactic	*S* uses expression (E1) which is syntactically appropriate to assert *p*.	*S* uses expression (E2) which is syntactically appropriate to greet someone.
2. Preparatory	(a) *S* has evidence (reasons, etc.) for the truth of *p* (b) It is not obvious to both *S* and *H* that *H* knows (does not need to be reminded of, etc.) *p*	*S* has just encountered (or been introduced to, etc.) *H*
3. Sincerity	*S* believes *p*	None
4. Propositional Content	Any proposition *p*.	None
5. Essential	Counts as an undertaking to the effect that *p* represents an actual state of affairs. .	Counts as courteous recognition of *H* by *S*.

On this account, in a standard instance, when we say that *S* has *asserted p*, we are saying that *S* commits himself to the belief that *p* is true, that he has some reason for his belief, and that he believes there is also some reason for his asserting *p* at that time to *H*. How does he do these things? By uttering, in the appropriate circumstance, a string of sounds which conform to the syntactic conditions of the language *S* and *H* share. When, on the other hand, *S greets H* he need not express any proposition nor need he commit himself to believe any proposition which might be expressed in the greeting. But for his use of an expression to count as a greeting, he must use it under appropriate preparatory conditions.

Three general features of the five sets of conditions must be noted. First, they are *conventional*. Secondly, they assume intentionality. Thirdly, while a speaker may have many intentions when he speaks, whatever else he intends, he intends to bring about these other effects *by* bringing out certain illocutionary effects. *S* intends to get *H* to *understand* what *S* means. And *S* does so by making use of sounds in accordance with conventions shared by both.

Not only does communication involve conventions; it occurs via the recognition that the conventions are being followed and the recognition of which conventions they are. Thus, Professor Alston uses the concept "illocutionary act potential" to explicate meaning.[16] Roughly speaking, the meaning of a sentence is the list of illocutionary acts it can be used to perform and the meaning of a word is to be explicated by showing how its use in sentences affects the illocutionary act potential of those sentences. I shall return to these ideas shortly when we try to get a grip on the semantical system.

Illocutionary acts and acts defined by reference to the particulate systems (2.1, 2.2 and 2.3) do not exhaust the class of language acts. We have yet to discuss 2.4. Suppose that George's house is burning and someone says to him, "Your house is on fire!" In this sentence, "house" is used to refer to some object in the world. Then, in the latter part of the sentence, a property is predicated of the subject. Referring and predicating are forms of language act. They are performed by parts of sentences--but only within sentences which also perform some illocutionary act. Let us call them word-use acts.[17] Word-use acts, like illocutionary acts, are speech acts carried out in accordance with certain conventions. Thus, for word-use acts of referring to occur, conventional conditions must hold. There are several kinds of referring acts.[18] Of course, such acts pervade language acts, whether spoken or written, as do acts of predication. A person learning to read must learn to recognize their occurrence in order to understand the sentences he faces. But what is perhaps of greatest significance is that these two kinds of word-use acts are only two among many.

> Uses of words are as various as uses of language are numerous. Words are used to refer, to distinguish, to relate, to qualify; they may be used as

> conjunctions, forming assertions by connecting sentences, or marking off the conclusions of arguments; they may be used to indicate that a certain kind of statement is to be made, where statements may variously be classified, or that a certain use of language is being attempted; they may be used to hold open gaps, signal cross references; to indicate the mode of utterances and where they start and stop, and how definitively are to be taken[19]

I hazard the guess that a concept of word-use act potential will prove as helpful as the notion of illocutionary act potential in clarifying the semantical system. But it is not clear to me what the existence of this type of potential implies for the teaching of reading. Reference and predication are so pervasive that it is hard to believe that children cannot quickly learn to recognize their occurrence in printed sentences. But many other word-use acts do not occur as frequently and demand, perhaps, some sort of systematic instruction. It would seem that any systematic instruction can be of only two types: (a) systematic ordering and presentation of instances. (b) some sort of formalization of the conventions for such acts. Just when, if at all, or how such instruction ought to be carried out is an empirical question—no doubt one of great complexity.

IV. THE SEMANTICAL SYSTEM

The lexical and grammatical systems and the speech act conventions each make a contribution to what we gloss as "meaning." The semantical system is the conventions of the two particulate systems operating within conditions established by the conventions for word-use and illocutionary acts. One can talk as if illocutionary acts are produced by starting with phonemes and building level upon level to produce an illocutionary act. Of course in a sense this is true, but it exaggerates the particulate and stratified aspects of language as against the degree to which the various conventions form a unified whole. The illocutionary act is the focal point. In effect, a speaker meeting a person for the first time, searches his lexical and grammatical repertoire for those words and their arrangement which convention decrees for that situation.

This complex interacting of conventions is the semantic system. Needless to say, it is far more complex and subtle than my discussion suggests. But the reader, like the listener, makes use of his knowledge of this complex system to catch the meaning of the writer.

V. LEVELS OF COMPREHENDING

The lowest level of Comprehending occurs when the reader successfully utilizes his mastery of the lexical system of his language to interpret the printed words confronting him. The highest level of Comprehending occurs when he utilizes his understanding of the illocutionary act potentials of the sentences which confront him. The former successes are necessary but not sufficient for the latter successes. Not only must the reader have some grasp of the lexical and grammatical systems, he must also possess an understanding of the very complex conventional conditions in which the occurrence of various grammatical patterns produce certain word-use and illocutionary acts.

How can he make the necessary connections? The syntactic conditions reveal that there must be conventional connections between the particulate systems and the uses to which language can be put, between the particulate systems and word-use and illocutionary act potentials. These connections are not yet fully understood, particularly the connections between grammar and function. It seems likely that it is in the deep grammatical structure that we will find the correlations necessary to link grammar to word-use and illocutionary acts.[20] As many of those who are interested in the problems of teaching reading have recognized, there is need for much work to sort out the connections and to develop ways to teach them to students.

VI. CONCLUSION—READING AS COMPREHENDING IS THE CENTRAL SENSE OF READING

Even if we consider only Saying and Comprehending, it is obvious that reading is a very complex undertaking. It involves a large variety of interwoven kinds of success, illustrated in this diagram:

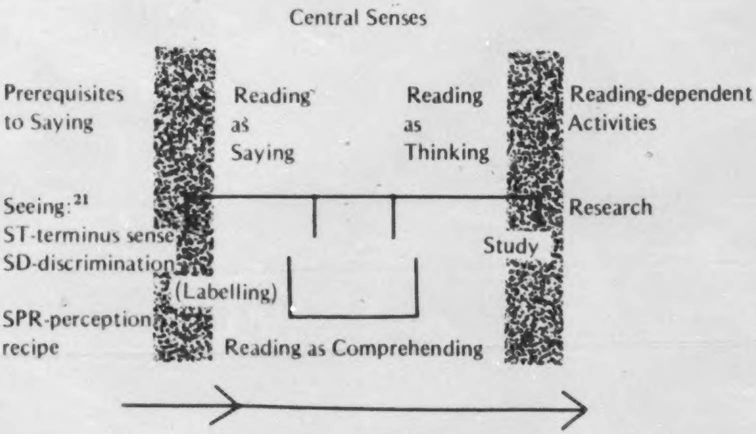
Central Senses
Prerequisites to Saying
Reading as Saying
Reading as Thinking
Reading-dependent Activities
Seeing:[21]
ST-terminus sense
SD-discrimination
(Labelling)
SPR-perception recipe
Research
Study
Reading as Comprehending

Figure 1

Reading (no pun intended) from left to right the diagram is arranged in prerequisite order. It contains the three major senses of reading (Saying, Comprehending and Thinking) and indicates that these overlap in a catenulate fashion. The two shaded areas represent the borderlines of the concept. Within the left-hand borderline I place Seeing in the "label" sense to indicate that success in this is the most primitive form of reading. The other borderline I represent as lying between Thinking and studying. It will be my chief aim in another paper to adumbrate reading as Thinking and indicate why I represent the borderline in this way. I shall also explain the notion of reading-dependent activities. The diagram shows us that Comprehending is the central sense of reading, although some forms of Saying and Thinking are indisputably types of reading. Roughly speaking, the illocutionary successes of Comprehending are successes with *sentences*. Yet we often talk of reading a story, a poem, a play, a book or even of reading an author. These are instances of reading as Thinking.

In all forms of reading, however, the point which bears most crucially on the pedagogy of reading is this: the pedagogy of practice—the assumption that people learn to read and become better readers by practising skills—is misguided. The successes of reading are receptions. What is needed is a developed pedagogy of receptions. And this, it seems to me, will centrally involve the "teaching" of attention and the teaching of rules, concepts and conventions.

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1. L. B. Daniels, "Preamble to An Analysis of the Concept of Reading," *The Journal of Education* (UBC), Volume 16, (April, 1970), pp. 73-84.

2. Gilbert Ryle, *The Concept of Mind* (New York: Barnes and Noble, 1949), p. 149 and passim.

3. See: I. Scheffler, *Conditions of Knowledge* (Chicago: Scott, Foresman and Company, 1965), pp. 31-33.

4. Alan R. White, *The Philosophy of Mind* (New York. Random House, 1967), pp. 68-69.

5. Ibid.

6. Jonas F. Soltis, *Seeing, Knowing and Believing* (Palo Alto, California, 1966).

7. Max Black, *The Labyrinth of Language* (Harmondsworth, U.K. Penguin Books, 1968), p. 22. He calls the second system the "morphemic" system rather than morphological.

8. Ibid., p. 81.

9. Ibid.

10. L. Wittgenstein, *Philosophical Investigation.* Translated by G.E.M. Anscombe. (Oxford. Blackwells, 1958), p. 6e et passim.

11. William P. Alston, *Philosophy of Language.* (Englewood Cliffs, N.J., Prentice Hall, 1964), p. 33.

12. For more on this topic, see: Searle, John R. *Speech Acts: An Essay in the Philosophy of Language* (Cambridge University Press, 1970), p. 24. Also: Goldman, Alvin I. *A Theory of Human Action* (Englewood Cliffs, N.J. Prentice Hall, 1970).

13. Alston, p. 35.

14. John R. Searle, *Speech Acts: An Essay in the Philosophy of Language.*

15. Based upon Professor Searle's summary. Searle, pp. 66-67.

16. Alston, p. 38.

17. My account of word-use acts is based upon Professor Searle's discussion of "propositional acts" (see p. 34 et passim) and on an account of word uses by D.S. Shwayder:

"Uses of Language and Uses of Words," in *The Theory of Meaning*, ed. G.N.R. Parkinson (London, Oxford University Press, 1968), 128-41.

18. Searle, p. 27.
19. Shwayder, pp. 129-30.
20. So at least Professor Searle thinks. Searle, p. 64.
21. See Soltis for an account of these concepts.

RESPONSE TO DANIELS

Donna H. Kerr
University of Washington

The topic of reading is mighty complex. To say virtually anything about reading is to assume some theory of meaning, some theory of grammar, some theory of semantics of natural language, and much more. And all of these invite discussion on a formidable range of issues. But instead of treating the Daniels paper as a microcosm of philosophy of language and theoretical linguistics, I would like to focus on and suggest a way to develop the central point of the paper.

There are two claims that one might treat as the central point. The first is that reading comprehension depends upon the conforming of printed utterances to language conventions on several catenary levels and upon the assumption that this conforming of the utterances to those conventions is intentional. The second is that reading comprehension is something that happens to one, a reception, rather than something one does intentionally. It would be a mistake to take the first to be the central claim. The notions of language conventions, levels of reading, and intentionality are widely accepted in the linguistic community, though there are notable disputes regarding what parts of grammar are merely conventional and what parts are "wired into" human understanding. Moreover, reading instruction and research do employ, if sometimes awkwardly, those notions.[1] We should, then, treat the claim that the successes of reading are receptions as the central point of the Daniels paper.

To introduce my suggestion about how one might develop the notion of reading as receptions, I need to indicate the difficulties inherent in trying to glean insights into reading from philosophy of language—a literature that features speaking with an occasional allusion to listening, but that almost never mentions reading. The Daniels recipe for building the bridge from that literature to his concern with reading is this:

(1) Note the conventional acts of speaking.
(2) Claim that speakers and hearers "adhere to shared conventions" and that this follows from the reversibility of speaker and hearer roles.

(3) Assume that as a reader one would comprehend in essentially the same way as would a hearer or listener.

(4) Infer that the act of reading as comprehending occurs as recognition of printed utterances as conforming, by design, to language conventions.

Now, in this context, I have no quarrel with the moves from spoken utterances to printed utterances and from hearer or listener to reader. But I am not so sure that the speaker and listener (thus, writer and reader) roles are reversible. This brings us to my agenda. I wish to argue that the two roles (speaker or writer and listener or reader) are irreversible or asymmetrical in a way that is relevant to understanding reading as receptions.

In a highly condensed form, I shall distinguish between writing and reading in a fashion that is compatible with the notion of reading as reception. Next, I'll point to a piece of the Daniels paper that might productively be refined. And finally I'll try to indicate a direction to head the inquiry so that it might serve our pedagogic interests.

The distinction. When writing in a way that makes sense, one intentionally does particular things, viz. one intentionally makes printed utterances that conform to sense-making conventions. That is, the writer *intends* his or her productions. When comprehending as a reader, one instead *attends* to particular things. Though in a general sense the reader may want to comprehend the printed utterance, one logically cannot intentionally make particular sense of the utterance. Put otherwise, one might have in mind to attend to whatever comes up, but one cannot intend the particular reception or comprehension. Thus, attending serves the same communication function for the reader or listener as intending serves for the writer or speaker. If writing/speaking and reading/listening are asymmetrical in this way, then while theory of intention is crucial to understanding writing, theory of attention would provide the key to understanding reading.[2]

Now the refinement. The Daniels account of the "events" of oral communication does include the hearer or listener's attending to something. But to what? To the speaker. Such an account is too gross to be helpful, for one could attend to the speaker and comprehend nothing. In fact, one could attend to the speaker and not even listen to what the speaker utters. So we must ask, specifically to what must the hearer attend if he or she is to comprehend? The novice to the language might have to attend to the sounds, the words, or the grammatical structure of the utterances, while the master might directly attend to the assertion, request, promise or whatever. Only by taking care to specify the object of the listener or reader's attending can we differentiate the ways and extents to which one can and does comprehend.

And finally, where might we go from here? Much of our pedagogic efforts in reading instruction go into trying to help persons read with less difficulty, to read in a second-nature way. When has comprehension become second nature? When one can attend to the object of the comprehension without attending to anything else (e.g., when one can comprehend the sentence "je n'y manquerai pas" without attending to the sounds, the words, or the grammatical structure).

My suggestion is this. Much as the notion of basic action in theory of intention might help account for differences between speaking and writing with difficulty and doing so with facility, so the notion of basic reception in a theory of attention might help us account for differences between listening and reading with difficulty and doing so with ease. If a basic action for a person is that which he or she can intend without intending anything else,[3] than a basic reception would be that to which a person can attend without attending to anything else. To become masterful at reading would be to advance one's repertory of basic receptions to the higher catenary levels. It is not that readers whose basic receptions are on lower levels cannot comprehend, say, a sentence; but if they do, it is with difficulty. A difference between the sometimes student of French and the master is that while the sometimes student has to figure out "je n'y manquerai pas" (maybe by attending to the words and the grammatical structure), the master can attend to the sentence without attending to anything else. For the master, attending to sentences in the language has, generally, become second nature.

A theory of attention with such a notion of basic receptions could further be used to illuminate Mr. Daniels's next topic: reading as thinking. On that level and above, the theory would include considerations of knowledge-in-use and treat conceptual frameworks, paradigms and the like as objects of higher-level, yet possibly basic receptions. But since Mr. Daniels has left that topic for another paper, as respondent I, following suit, shall resist the temptation to pursue that lead in this context.

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1. For two examples of works that use these notions and that are widely heralded both in courses on reading research and in courses on reading instruction, see Eleanor J. Gibson and Harry Levin, *The Psychology of Reading* (Cambridge, Massachusetts: MIT, 1975) and Frank Smith, *Understanding Reading: A Psycholinguistic Analysis of Reading and Learning to Read* (New York: Holt, Rinehart and Winston, 1971).

2. For other ways in which the two might be asymmetrical, see my "Listening and Speaking: Asymmetries," Ph.D. Dissertation, Columbia University, 1973 (Ann Arbor, Michigan: University Microfilms, 1974).

3. In a discussion of his yet unpublished manuscript (read at the University of Washington Philsophy Colloquium, 23 February 1979) "Intention and Action," John Searle assented to this description of basic actions.

THE PLACE OF THE INDIVIDUAL IN JOHN DEWEY'S DEMOCRATIC LIBERAL PHILOSOPHY

Pyong Gap Min
Georgia State University

I. INTRODUCTION

In his book, *Class, Bureaucracy, and Schools,* published in 1971, Michael Katz signalled a new direction in interpreting the progressive liberal tradition and Dewey's philosophy by suggesting that:

> the emphasis on community in Jane Addams and the definitions of democracy and experience in Dewey provide particularly subtle and sophisticated instances of the widespread attempt in their time to foster modes of social control appropriate to a complex urban environment. Most starkly, both Addams and Dewey in the last analysis stressed the subservience of individual will and aspiration to those of the group.[1]

Since Katz's volume appeared, Clarence Karier, Walter Feinberg and other revisionist scholars have attempted to interpret Dewey's pragmatic liberal philosophy and his progressive liberal reform in this direction. To quote some significant statements concerning this interpretation:

> Although Dewey considered himself a socialist, these were not concerns of a radical socialist but rather one of a management welfare state socialist interested in the development and maintenance of the system.
>
> • • •
>
> John Dewey was committed to the economic growth and progress of that society, even though such progress might require manipulation of Polish workers.[2]

> Often overlooked is Dewey's commitment to a planned society in which economic hardships are cushioned and technology encouraged. In part, this commitment meant that access to the labor market had to be controlled by some public institution—the school—and that production and consumption had to be more rationally supervised.[3]

> Both poverty and laissez-faire capitalism were important issues, not basically because of their immoral nature, but because in their more extreme forms they were a threat to the stability required for continued technological growth.[4]

> in practice Dewey's preference for a collective and cooperatively organized society meant that the individual was sacrificed to the efficient workings of politico-economic organizations.[5]

Thus they interpret Dewey as an exponent of welfare state capitalism concerned mainly with the control of the masses, guided by experts, required in a twentieth-century technological society. In their view, progressive liberal reform in which Dewey was theoretically and practically involved was the effort not to enhance individual freedom and promote general welfare in industrial society but to stabilize and rationalize an industrial system at the expense of personal freedom and social justice.

The above interpretation may gain support from a small portion of Dewey's writings and activities, but it seems to conflict with the core of his democratic liberal philosophy and with the nature of his progressive liberal reform. Dewey's democratic liberal philosophy placed the primary emphasis on the individual, his growth, his personality, his choice and action, and Dewey's progressive liberal reform was concerned mainly with preserving individuality in twentieth-century social conditions. This paper intends to clarify some important aspects of Dewey's democratic liberal philosophy and the nature of his liberal reform with reference to the revisionist interpretation.

II. DEWEY'S MEANING OF LIBERALISM

Karier, Feinberg, and other critics consider Dewey's concern for social control and collective life as the main aspect of his liberalism. Dewey emphasized, however, the intellectual, moral attitude as the central aspect of his liberalism. In a clarification of the term, "liberalism," Dewey said that "the word must be defined so as to mean a moral attitude and ideal."[6] For him, the liberal tries to test all ideas and principles by controlled experience and experiment rather than to accept them as dogmas. Thus he proclaimed that liberalism is committed to "experimental procedure."[7] And the commitment of liberalism to experimentalism carries with it the doctrine of free inquiry. According to him, the liberal "knows that freedom of thought in inquiry and in dissemination of the conclusions of inquiry is the vital nerve of democratic institutions."[8] Dewey's definition of liberalism as a moral ideal significantly influenced his concept of democracy. For him, democracy is not narrowly political in the sense of providing a representative government and a bill of rights. Nor is it narrowly economic in the sense that it aims to provide equal opportunity. For him, democracy "is primarily a mode of associated living, of conjoint communicated experience."[9] And he said:

> The keynote of democracy as a way of life may be expressed, it seems to me, as the necessity for the participation of every mature human being in formation of the values that regulate the living of men together: which is necessary from the standpoint of both the general social welfare and the full development of human beings as individuals.[10]

Thus Dewey's liberalism was not, as revisionist critics describe it, merely a political and economic doctrine which was concerned with the reconstruction of economic institutions through social planning. It was a moral ideal which was concerned mainly with the reorganization of old habits and institutions through social inquiry. Dewey emphasized the experimental attitude as the central aspect of his liberalism not merely in one or two pieces of his writings but in most of his educational, social and political writings. Thus the revisionist interpretation of Dewey as concerned mainly with social control is likely to encounter many difficulties in interpreting his writings. Moreover, Dewey's definition of liberalism as a moral ideal greatly influenced his meaning of science and his pragmatic ethics. That is, Dewey emphasized a critical, inquiring, reflective attitude as the central aspect of both scientific method and morality. Hence revisionist scholars cannot present their interpretation of Dewey's liberalism without distorting his notion of science and his pragmatic ethics. In fact, they distort both as I have tried to show somewhere else.

III. SOCIAL CONTROL OF ECONOMIC FORCES

Revisionist scholars may argue that what Dewey said about liberalism is less important for an understanding of his liberal position than what he actually tried to do and that the thrust of his liberal reform was to seek social control. Of course, Dewey argued for social control of economic forces. But he argued for social control not to subordinate individuals to an industrial system but to liberate individuals from control and exploitation by economic power. For Dewey, liberalism, in its origin in the eighteenth century, stood for "the development of inherent capacities of individuals made possible through liberty, and the central role of free intelligence in inquiry, discussion and expression."[11] And his liberal reform aimed to achieve in twentieth-century conditions what he believed to be the enduring values of the eighteenth-century liberalism. In Dewey's view, the eighteenth-century liberal defined freedom and individuality in terms of the liberation of individuals from social institutions simply because at that time feudalistic social institutions were restrictive and oppressive of individual freedom. The social conditions had, however, radically changed by the middle of the nineteenth century. Dewey observed:

> By the middle of the nineteenth century the contemporary scene had radically altered. The economic and political changes for which they strove were so largely accomplished that they had become in turn the vested interests, and their doctrines, especially in the form of *laissez faire* liberalism, now provided the intellectual justification of the *status quo.*[12]

Under twentieth-century economic conditions, the great masses of people are both materially and intellectually at the mercy of a limited number of businessmen, financiers and industrialists. Hence, social control of economic forces is necessary for the protection of individuals.

Unfortunately, however, the older liberals did not recognize the historical change in the nature of the problem. They tried to solve a new problem with old concepts of liberty and individuality. Dewey criticized the older liberals:

> The earlier liberals lacked historic sense and interest.
>
> • • •
>
> It blinded the eyes of liberals to the fact that their own special interpretations of liberty, individuality and intelligence were themselves historically conditioned, and were relevant only to their own time. They put forward their ideas as immutable truths good at all times and places; they had no idea of historic relativity, either in general or in its application to themselves.[13]

In Dewey's view, the older liberals were themselves absolutists in their own creed, though they attacked political absolutism to liberate themselves from control. They were absolutists in holding that: "beneficial social change can come about in but one way, the way of private economic enterprise, socially undirected, based upon and resulting in the sanctity of private property that is to say, freedom from social control."[14] For Dewey, the trouble with these liberals and many others was that they failed to see the fact that democracy or liberty can be achieved only by eliminating particular oppressive forces in concrete situations. They treated democracy or liberty as given independent of historical conditions.

> The trouble, at least one great trouble, is that we have taken democracy for granted; we have thought and acted as if our forefathers had founded it once for all. We have forgotten that it has to be enacted anew in every generation, in every year and day, in the living relations of person to person in all social forms and institutions.[15]

> The only hope for liberalism is to surrender, in theory and practice, the doctrine that liberty is a full-fledged ready-made possession of individuals independent of social institutions and arrangements, and to realize that social control, especially of economic forces, is necessary in order to render secure the liberties of the individual, including civil liberties.[16]

Karier criticized Dewey for changing the meanings of the terms, freedom, individuality and equality.[17] However, Dewey changed their meanings not, as Karier might suggest, to subordinate individuals to the requirements of an industrial system, but to preserve the original spirit of these terms in a twentieth-century context. Dewey would respond to Karier by saying that he treats liberty as "a full-fledged ready-made possession of individuals independent of social institutions and arrangements."

Thus what Dewey attacked was not liberty as valued by the eighteenth-century liberals but a particular form of liberty identified with the possession of economic power to control and exploit other people. The defenders of the capitalist economic order tried to justify laisse-faire individualism in the name of initiative, independence, choice and responsibility. Dewey pointed out, however, that it was the form of liberty defended by the conservative supporters of capitalism that destroyed individual virtues such as choice, initiative and independence. He observed:

> The other line of defense is unceasing glorification of the virtues of initiative, independence, choice and responsibility, virtues that center in and proceed from individuals as such. I am one who believes that we need more, not fewer, "rugged individuals" and it is in the name of rugged individualism that I challenge the argument. Instead of independence, there exists parasitical dependence on a wide scale—witness the present need for the exercise of charity, private and public, on a vast scale.[18]

For Dewey, it was essential to a more equal distribution of power for society as a whole to control economic forces. People opposed social control on the assumption that there was no control at all. For Dewey, however, it was a delusion to think that there was no control. He said,

> It is nonsense to suppose that we do not have social control *now*. The trouble is that it is exercised by the few who have economic power, at the expense of the liberties of the many and at the cost of increasing disorder, culminating in that chaos of war which the representatives of liberty for the possessive class identify with true discipline.[19]

Revisionist scholars focus their critique of Dewey on the issue of social control perhaps on the assumption that Dewey created social control where there was no control at all.[20] They should, however, remember that Dewey tried to replace one form of social control, which was undemocratic, with another form of social control, which, as we will see in the following, is democratic.

IV. EXTERNAL CONTROL VS. INTERNAL CONTROL

Dewey emphasized that his argument for social control was not "a plea for a return to some kind of social control brought about through, and perpetuated by, external institutional means."[21] He made a distinction between totalitarian and democratic social control. According to Dewey, democratic social control is different from totalitarian social control in that in the former control is to be instituted by means of individual participation, while in the latter control is to be instituted by means of coercive control from above. Thus democratic social control aims to achieve economic and social changes without destroying intellectual and moral freedom, free participation, discussion and inquiry. Dewey said:

> The urgent and central question at the present time is whether the needed economic-social changes (with which legal and political changes are bound up) can be effected in ways which preserve and develop what was fundamental in earlier liberalism, or whether social control is to be instituted by means of coercive governmental control from above in ways which destroy for a time (a time whose length cannot now be measured) all that was best worth conserving in older democratic ideas and ideals: intellectual and moral freedom; freedom of inquiry and expression; freedom of association in work, recreation and for religious purposes....[22]

According to Dewey, freedom is not an abstract principle but effective power to do specific things, and "the possession of effective power is always a matter of the *distribution* of power that exists at the time."[23] Accordingly, "*The system of liberties that exists at any time is always the system of restraints or controls that exists at that time.*"[24] It means that freedom in the absolute sense is impossible, that unlimited freedom on the part of one person or group leads to restraints on the others. This contradiction, Dewey argued, shows that the issue is not whether we should choose between freedom and control. He said that "the issue is simply that of one system of control of the social forces which the distribution of liberties depends, versus some other system of social control which would bring about another distribution of liberties."[25] He claimed that the system which harmonizes freedom and control is the one based upon the idea of freedom as intelligent choice. In a particular situation, a person can choose the course of his action intelligently on the basis of the probable social consequences of the action, and this is the same as saying that he can control his behavior intelligently. Thus control and freedom go together.

Karier criticizes Dewey for blurring freedom and control.[26] As we have noted, however, Dewey's point is that the system of internal control can eliminate both the problems of unlimited freedom and the problems of external control. Hence, unless Karier supports either the method of external control or laissez-faire individualism, he is not in a position to criticize Dewey. Here he simply begs the question. That is, he wants to attack Dewey's meanings of freedom and control without facing the issue.

For Dewey, democracy is a moral ideal in that the individual voluntarily limits his own conduct. It is the individual himself, with his own interests and attitudes, who chooses a course of action in a particular situation. Thus, one person or group cannot make a decision for another. For Dewey, "The moral life is lived only as the individual appreciates for himself the ends for which he is working, and does his work in a personal spirit of interest and devotion to these ends."[27] Accordingly, Dewey states: *"the object of moral principles is to supply standpoints and methods which will enable the individual to make for himself an analysis of the elements of good and evil in the particular situation in which he finds himself."*[28] In Dewey's view, "personality" has a significant meaning for democracy in that it is the individual himself who realizes his own personality, however important the environmental stimuli and encouragements may be for its realization. Thus personality cannot be obtained by one person or group for another. As Dewey put it:

> In one word, democracy means that *personality* is the first and final reality. It admits that the full significance of personality can be learned by the individual only as it is already presented to him in objective form in society; it admits that the chief stimuli and encouragements to the realization of personality come from society; but it holds, none the less, to the fact that personality cannot be procured for any one, however degraded and feeble, by any one else, however wise and strong.[29]

Dewey's consideration of the individual as "the author of action" seriously affected his psychology. He repeatedly claimed that there is an inherent connection between commitment to democracy and faith in human nature. For him, democratic belief is "belief in the capacity of every person to lead his own life free from coercion and imposition by others provided right conditions are supplied."[30] Thus he attacked the Platonic tradition in which intellectual power was believed to be the possession of the few.

> Democracy is an absurdity where faith in the individual is impossible; and this faith is impossible when intelligence is regarded as a cosmic power, not an adjustment and application of individual tendencies. It is also impossible when appetites and desires are conceived to be the dominant factor in the constitution of most men's characters, and when appetite and desire are conceived to be manifestations of disorderly and unruly principle of nature.[31]

In Dewey's view, if the average individual is believed to be incapable of developing his own intellectual ability through education and experience, it follows that the coercive control and regulation of people by government is the only effective form of political organization. Thus he asserted that "Those who wished to justify the exercise of authority over others took a pessimistic view of the constitution of human nature."[32]

Thus it was Dewey's fundamental philosophical concern to create a democratic society in which the individual voluntarily limits his own conduct free from coercion and imposition from others. In view of this, it is amazing how revisionist critics indict Dewey of supporting external, bureaucratic control.

Revisionist writers criticize Dewey for believing in the rational character of man,[33] and for depending upon education as the fundamental method of social reform.[34] They need, however, to remember that Dewey's faith in the rationality of man and his emphasis on education as the method of social reconstruction were inseparably related to his effort to avoid collectivistic, bureaucratic social control.

V. DEWEY'S VIEW OF SOCIAL INSTITUTIONS

Dewey emphasized a full development of individual capacities as the major goal of a democratic society. Accordingly, he viewed all social institutions mainly as a means to individual growth. For him, the worth of political institutions is to be determined by the extent to which they make contributions to the development of individuals. As he put it:

> Government, business, art, religion, all social institutions have a meaning, a purpose. That purpose is to set free and to develop the capacities of human individuals without respect to race, sex, class or economic status. And this is all one with saying that the test of their value is the extent to which they educate every individual into the full stature of his possibility. Democracy has many meanings, but if it has a moral meaning, it is found in resolving that the supreme test of all political institutions and industrial arrangements shall be the contribution they make to the all-around growth of every member of society.[35]

For Dewey, the aim of education was not, as revisionist writers claim, to select social roles, but to help develop the full range of individual capacities. In *Democracy and Education*, Dewey asserted that "the aim of education is to enable individuals to continue their education" and that "the object and reward of learning is continued capacity for growth."[36]

It is in this context that we can better understand Dewey's theory of the state. According to him, private activities have indirect consequences for the interests of the public. And "the state is the organization of the public effected through officials for the protection of the interests shared by its members."[37] Since individual behavior has different consequences in different social conditions, the power and concrete functions of the state are different in different historical conditions. Thus Dewey gave practical functions rather than metaphysical functions to the state. He claimed that the functions of the state should be empirically determined by observations of social conditions in concrete situations.

> There is no more an inherent sanctity in a church, trade-union, business corporation, or family institution than there is in the state.
>
> * * *
>
> Just as publics and states vary with conditions of time and place, so do the concrete functions which should be carried on by states. There is no

> antecedent universal proposition which can be laid down because of which the functions of a state should be limited or should be expanded. Their scope is something to be critically and experimentally determined.[38]

As is clear from this statement, by giving practical functions to the state, Dewey attacked those historic theories, associated with the German tradition, which a priori gave the idea of the state sanctity and absolute power. In Dewey's view, they have considered the state not as a means to an end of achieving individual development and welfare but as an end itself and thus subordinated the individual to the state. Dewey's definition of the state was also directed against the Lockean tradition according to which the state is inherently hostile to the individual.

Revisionist scholars describe Dewey as putting a premium upon collective institutional progress over individual freedom and welfare. The preceeding observations show, however, that the opposite is the case. In other words, Dewey considered all social institutions, including the state, mainly as tools for individual growth and welfare. Of course, Dewey's idea of the state is not without problems. Though he defined the state as the organization of the public for the control of indirect consequences of private behavior, he was not clear enough as to how the public can participate in political decision-making. In *The Public and Its Problems*, for example, Dewey maintained that people should develop the political techniques of discussion and inquiry to participate in determinations of political affairs. But he failed to address himself to political conditions under which lay people can participate in decision-making. In spite of this unclarity, however, Dewey's intention to use the state and other social institutions for the welfare of the individual is unquestionable.

In connection with Dewey's view of political institutions, we need to deal with one misunderstanding of his position. His critics depict him as failing to devote sufficient attention to the oppressive aspects of political institutions.[39] It is not, however, true. Dewey was well aware of and seriously concerned about the oppression of individual freedom by political institutions. He admitted that even the democratic form of government tends to favor a particular group and restrict individual freedom. Thus Dewey's claim was not that political institutions had not been restrictive and oppressive but that we should make efforts to create democratic social institutions which could be used for the protection of individuals. Dewey formulated his position more clearly in the following statement than in any other.

> It is also true, as well as even more important (because it is a factor in causing this rigidity) that our institutions, democratic in form, tend to favor in substance a privileged plutocracy. Nevertheless, it is sheer defeatism to assume in advance of actual trial that democratic political institutions are incapable either of further development or of constructive social application.[40]

In the 1920's and the early 1930's, Dewey argued for the regulation and control of business, industrial and financial organizations by government, assuming that government is the only agency to protect individuals. In the late 1930's, when political collectivism from both the left and the right was destroying freedom and even civilization itself, Dewey came to realize how dangerous political institutions can be to the individual, to his choice, his belief, and his character and action. Thus he said that "I should now emphasize more than I formerly did that individuals are the finally decisive factors of the nature and movements of associated life."[41] He asserted:

> It has been shown in the last few years that democratic institutions are no guarantee for the existence of democratic individuals. The alternative is that individuals who prize their own liberties and who prize the liberties of other individuals, individuals who are democratic in thought and action, are the sole final warrant for the existence and endurance of democratic institutions.[42]

Dewey knew the general tendency in many countries towards state socialism. Thus he warned that "in order to get away from the evils of private economic collectivism we shall plunge into political economic collectivism."[43]

VI. SUMMARY AND CONCLUSION

Dewey considered free inquiry, discussion and expression, and the full development of individual capacities through them as the central aspect of his liberalism. He attacked laissez-faire individualism and argued for social control of economic forces because he realized that unlimited individualistic action in the economic sphere oppresses genuine individuality and personal development on the part of the masses. According to Dewey, all social institutions are important only as means to the goal of individual growth and welfare. And he believed that the role of government to protect individuals is greater in an industrial age than before.

Dewey was as much concerned about political collectivism as about economic individualism. Thus he recommended the method of democratic control as an alternative to the two poles of social organization. For Dewey, democratic social control aims to achieve economic and social changes by means of individual participation while totalitarian social control depends upon coercive governmental control from above for social reconstruction. Though Dewey emphasized the environmental factors as significant to individual development, he considered the individual as the final determiner of his own personality and his own conduct. Dewey's emphasis on the individual as "the author of action," in fact, constitutes the backbone of his concept of democracy, democracy as a way of life.

The foregoing analysis shows that the individual takes the central place in Dewey's democratic liberal philosophy. That is, Dewey considered individual growth and welfare as the main goal of society, and he supported democratic social control in which control is to be instituted by individual participation and inquiry. Revisionist scholars such as Karier and Feinberg misinterpret Dewey's position both in the goal of society and in the method of social control. The claim that Dewey was concerned mainly with the economic growth of industrial society is a misinterpretation of his view of the goal of society. The argument that Dewey supported the control of one class by another, the control of the masses by experts, is a misinterpretation of his position on the method of social control. The radical critique of Dewey by revisionist scholars gives the impression that Dewey neglected individual welfare and freedom while his critics are the champions of the individual. I suggest, however, that it is not the case. Dewey was as much concerned for individual welfare and freedom as revisionist critics are. Unlike revisionist scholars, however, Dewey did not deal with the issues of individual welfare and freedom abstractly independent of historical conditions; he treated them concretely in the context of a twentieth-century industrial society. Their criticisms of Dewey suggest that this is the major difference between Dewey and revisionist scholars.

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1. Michael Katz, *Class, Bureaucracy, and Schools: The Illusion of Educational Change in America* (New York: Prager Publishers, 1971), p. 118.

2. Clarence Karier, "Liberalism and the Quest for Orderly Change," *History of Education Quarterly*, 12 (spring, 1972), p. 64.

3. Walter Feinberg, "Progressive Education and Social Planning," *Teachers College Record*, 73 (May, 1972), p. 485.

4. Walter Feinberg and Henry Rosemont, Jr., "Training for the Welfare State: The Progressive Education Movement," in *Work Technology, and Education*, eds. Walter Feinberg and Henry Rosemont, Jr. (Chicago: University of Chicago Press, 1975), p. 77.

5. Edgar Gumbert, "John Dewey and the New Liberalism: Reactions to the U.S.S.R.," *Educational Theory* 22 (summer, 1972), p. 358.

6. Dewey, "The Meaning of the Term: Liberalism," *The Social Frontier* 6 (February, 1940), p. 12.

7. Dewey, *Problems of Men* (New York: Philosophical Library, 1946), p. 137.

8. Dewey, "Liberalism and Civil Liberties," *The Social Frontier* 2 (February, 1936), p. 138.

9. Dewey, *Democracy and Education* (New York: The Free Press, 1966), p. 87.

10. *Problems of Men*, p. 58.

11. Dewey, *Liberalism and Social Action* (New York: Capricorn Books, 1963), p. 32.

12. Ibid., p. 33.

13. Ibid., p. 32.

14. Ibid., p. 34.

15. Dewey, "Education and Social Change," *The Social Frontiers* 3 (May, 1937), p. 238.

16. "Liberalism and Civil Liberties," p. 138.

17. "Liberalism and the Quest for Orderly Change," p. 76. See also Karier, "John Dewey and the New Liberalism: Some Reflections and Responses," *History of Education Quarterly* 15 (winter, 1975): 417, 426; and Karier, "The Odd Couple: Radical Economics and Liberal History," *Educational Studies* 7 (summer, 1976): 189.

18. *Liberalism and Social Action*, p. 38.

19. *Problems of Men*, p. 114.

20. In "Progressive Education and Social Planning," Feinberg says: "Progressives like Robinson and Dewey often justified their argument for social control by claiming that control was inevitable and that the only real issue was the direction it would take—democratic or totalitarian," (pp. 477-78).

21. *Problems of Men*, p. 105.

22. Dewey, *Intelligence in the Modern World*, ed., with an introduction, by Joseph Ratner (New York: The Modern Library, 1939), p. 425.

23. *Problems of Men*,p. 112.

24. Ibid., p. 113.

25. Ibid.

26. "Liberalism and the Quest for Orderly Change": 76.

27. Dewey, *John Dewey on Education: Selected Writings*, ed., with an introduction, by Reginald Archambault (Chicago: University of Chicago Press, 1974), p. 131.

28. Dewey, *Theory of the Moral Life*, ed., with an introduction, by Arnold Isenberg, (New York: Holt, Rinehard and Winston, 1960), p. 141.

29. Dewey, *John Dewey, The Early Works, 1882-1898, Vol. 1:1882-1888*, ed. by Jo Ann Boydston (Carbondale:Southern Illinois University Press, 1969), p. 244.

30. Dewey, "Creative Democracy:The Task Before Us," in *The Philosophy of the Common Man*, ed. Sidney Ratner (New York:G. P. Putnam's Sons, 1940), p. 244.

31. Dewey, *The Influence of Darwin on Philosophy and Other Essays in Contemporary Thought* (New York: Peter Smith, 1951), p. 59.

32. Dewey, *Freedom and Culture* (New York: G. P. Putnam's Sons, 1939), p. 29.

33. "Progressive Education and Social Planning," p. 486.

34. Feinberg, *Reason and Rhetoric: The Intellectual Foundations of 20th-Century Liberal Education Policy* (New York: John Wiley & Sons, 1975), pp. 84-85.

35. Dewey, *Reconstruction in Philosophy*, enlarged edition (Boston:Beacon Press, 1968), p. 186.

36. *Democracy and Education*, p. 100.

37. Dewey, *The Public and Its Problems* (Chicago, Swallow Press, 1956), p. 33.

38. Ibid., p. 74.

39. See, for example, Edgar Gumbert, "John Dewey and the New Liberalism": 346.

40. *Liberalism and Social Action*, p. 85. Revisionist critics seem to share with anarchists the view that any political institution, even a democratic one, is destructive to individuals. Particularly Feinberg's criticisms of Dewey suggest that he is close to accepting the anarchist assumption. For example, in a footnote in *Reason and Rhetoric*, Feinberg says: "if institutions do have such a large impact upon individuality, and if elements of the human will are included in the notion of individuality (as indeed they would be in Dewey's thought), then as institutions are controlled so, too, is the human will." (p. 18) In "Progressive Education and Social Planning," Feinberg also says: "in defining the public as those affected by the indirect consequences of private acts, Dewey allows that the state is the agency for caring for those consequences. The state's role is thus determined by the extent and intensity of indirect consequences. Given Dewey's belief in the inevitability of technology and his hesitation to question technological values, such a interpretation of the state gives it uncommon power. In a technological society the indirect consequences of private acts are enormous, extending as far as the economic well-being of an entire nation." (pp. 489-90) Particularly Feinberg's argument in the last quote seems to involve an uncritical assumption. Here he points out that Dewey's definition of the state gives it a great power in technological society. Of course, Dewey defined the state as the agency for controlling the indirect consequences of private acts partly from his consideration that in technological society private acts have enormous influence on the public welfare. Thus Dewey's interpretation of the state gives it, if not, as Feinberg suggests, "uncommon power," more power in technological society than in pre-industrial society. An indication of this fact cannot be, however, a criticism of Dewey's notion of the state. Feinberg himself admits that "In a technological society the indirect consequences of private acts are enormous, extending as far as the economic well-being of an entire nation." By admitting to this fact and by criticizing Dewey's view of the state for giving it more power in technological society, does Feinberg suggest that the indirect consequences of private economic activities to the general welfare should not be controlled? If it is the case, how can he argue for social justice? In the final chapter of *Rea-*

son and Rhetoric, Feinberg proposes that intellectual capacities be compensated through education. Does he believe that the compensation of native intelligence through education is possible without depending upon the power of the state? Though Feinberg seems to object to the control of the public consequences of private acts from the point of view of individual freedom, he should remember that unlimited freedom in private economic activities in technological society not only destroys social justice but also restricts individual freedom. Here, the trouble with Feinberg is that he treats liberty and social justice abstractly, independent of historical conditions.

41. Dewey, "What I Believe, Revised," in *Pragmatism and American Culture*, ed., with an introduction, by Gail Kennedy (Boston: D.C. Health and Company, 1950), p. 81.

42. Ibid., p. 32.

43. Ibid., p. 34.

RESPONSE TO PYONG GAP MIN

Michael L. Simmons, Jr.
State University of New York at Buffalo

The human "individual" is a ubiquitous and multi-faceted concept central to political, ethical, and educational activity and theory. Methodologically the "individual" can be described, analyzed, explained, stretched or compressed, compared, and evaluated. The normative factors present in the "individual" are especially clear in political or ethical discourse when, for example, the ascription to the "individual" of rights or obligations is the central issue. When people take seriously an historical claim about what has happened to the "individual" under certain conditions it becomes clear that "value," or an evaluation, is hard to separate from the "facts" that are claimed. The theoretical ubiquity of the "individual" follows, of course, from the ubiquity of real life individuals. Since each of us individuals is a social creature, carrying description and evaluation, it is no surprise that we as "individuals" continually crop up in serious debate about the history and worth of our social institutions.

Mr. Min's paper is part of just such a debate and in it he raises several important issues for those of us who study education. En route to identifying just one or two of them in this paper I want first to speak to the inner necessity, the *raison d'être*, if you will, of Mr. Min's paper. Mr. Min has not just "written a paper." Something brought it to life and it is this something that gives basic meaning to the uses to which he puts his premises and method and thus to the content of the paper. The inner necessity of Mr. Min's paper is found in the revisionists' false reading of Dewey. The structure of his paper makes this clear. So does Mr. Min's assertion that certain revisionist conclusions can not be made "without distorting his notion of science and his pragmatic ethics." A false reading which entails and includes distortion and misrepresentation of someone as important to past and present as Dewey by its very existence demands a refutation. Thus the inner necessity of Mr. Min's paper. It is the attempt to set the record straight on Dewey in order to refute the revisionists.

Common sense dictates the move that must be made. Show the reader the error of revisionist ways by representing an accurate exposition and analysis of

Dewey's treatment of the individual and his liberal democratic theory. And this is what Mr. Min has done. He has gone to his texts—or, to Dewey's texts—and he shows us that "Dewey's progressive liberal reform was concerned mainly with preserving individuality in twentieth-century social conditions." Or has he?

A giant problem faces Mr. Min, one that common sense does not usually recognize and one that Mr. Min does not address. It is this unrecognized problem that, I believe, undoes his paper as a refutation of the revisionists and seriously undermines his reading of Dewey.

The problem is best expressed as a set of related questions. What counts as a refutation of the revisionists? What counts as a true reading of Dewey? Or, how should one read Dewey? Or, better yet, how is one to interpret political philosophy or educational philosophy? Connected to this set of questions is one question about the revisionists: what is it they have revised?

Simply put, the revisionists have revised the meaning of an important part of reality, the inner dynamics and development of American society. Formally their message is that the past and present have not been and are not what they appear to the traditional interpretation. The content of their interpretation can be summed up as follows: in a social context dominated by the inner dynamics, needs, and values of corporate capitalism, liberalism and progressivism are ultimately a rationalization and support of the very social order they criticize. The revisionists have redefined the text.

In redefining the text the revisionists have also changed the rules of interpretation. Hear Clarence Karier as he says "the meaning of ideas and ideology, pragmatism included, must be judged in the final analysis by its consequences in action."[1] Walter Feinberg writes of the "peculiar logic that prevails among technological societies."[2] He says "Within Dewey's definitions of the very concepts of community and democracy lurked the values of technology and the possibility of subordinating participation and uniqueness to those values".[3] I read Feinberg as saying that Dewey does himself in, in part, because he does not truly understand the socio-historical content of one of his major concepts. We can see that Karier and Feinberg are telling us and showing us how to read and interpret political and educational philosophy. Their conclusions respecting Dewey, progressivism, and the individual are inseparable from the premises and methods they used to reach them. It is understood, I assume, that Karier and Feinberg, historian and philosopher, respectively, have interests and conclusions in common as also they have method, premise, interpretation, and conclusions that separate them, too.

Karier and Feinberg (who, respectively, reject and recommend avoiding use of the term revisionist) and others have done philosophy of education a painful favor. They have upped the ante respecting interpretation. Nothing says one must accept their standpoint, methods or conclusions. However, a rereading of Dewey on the individual in order to refute the revisionists ignores their interpretive standpoint at great risk. An exposition of Dewey's writings on the individual from a Deweyan standpoint can not refute the revisionists because what constitutes the Dewey text and how to read and assess it is what is in question. In their quest for meaning the revisionists show themselves to be good Dewey students. They read him as he read others, philosophically, historically, and ideologically, and this includes reading his books as well as going beyond them.

And so a peculiar thing has happened to Dewey. His philosophical project, like every philosophical project, is its own imperative. It says of itself: Go thou and do likewise. Dewey, by himself, in his own way, is always on the attack. By accepting the revisionist challenge and then refusing to speak to the inner logic of their critique of Dewey, Mr. Min has rendered Dewey passive and silent. Until Mr. Min faces up to revisionist premises and method and the relation of these to revisionist conclusions respecting Dewey, corporate capitalism, and the individual, nothing Dewey wrote can be of relevance to Mr. Min's refutation of the revisionists. The issue remains to be joined.

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1. Clarence J. Karier, "John Dewey and the New Liberalism: Some Reflections and Responses," *History of Education Quarterly*, 15 (winter 1975), p. 439.

2. Walter Feinberg, "Progressive Education and Social Planning," *Teachers College Record*, 73 (May, 1972), p. 488.

3. Ibid.

JUSTIFICATIONS FOR THE WORTH OF KNOWLEDGE

Robert E. Roemer
University of Texas at San Antonio

After a period of dormancy the purpose and composition of liberal studies have once again become a publicly visible issue in higher education. The publicity given by the lay and academic press to Harvard University's review of general education requirements signals that the traditional question of how to justify the worth of knowledge is once again on center stage. Hence this may be an opportune moment to consider a distinction that is often used in justifications for the worth of knowledge, that between the intrinsic and the instrumental value of knowledge. In a recent report issued by Columbia University on general education the following statement appears: "We train students in something, or for something, but when we say we educate them, we feel no need to continue the sentence."[1] The implication here is that education, in contrast to training, features knowledge which is pursued for its own sake. I suspect, however, that when liberal or humanistic studies are viewed as intrinsically valuable, arguments for their worth are doomed to failure. For this reason, the better course is to justify liberal studies in terms of their instrumental value.

I. DISTINCTIONS ABOUT KNOWLEDGE

Before attempting to make that point, let me first locate the distinction between the intrinsic and the instrumental worth of knowledge. There are, one might say, horizontal and vertical distinctions about knowledge: the horizontal distinctions separate the various types of knowledge and the vertical distinctions place knowledge on various levels of use. The work of Paul Hirst on the forms of knowledge provides a contemporary example of a horizontal distinction. According to Hirst, the domain of human knowledge can be differentiated into a number of logically distinct forms. Each form employs concepts, a propositional structure, and criteria of truth that are peculiar to itself. These identifying elements prevent any of the forms, either simply or in combination, from being reduced to any other.[2] In general, horizontal distinctions analyze the content of knowledge. Vertical distinctions, for their part, place this content at various levels of use. Thus knowledge in the abstract is different from knowledge in collective use which is different from knowledge as it is found in the life of an individual. Knowledge in the abstract is represented by the conceptual structure of theories, knowledge in collective use by the theoretically informed activities of groups of disciplinarians, and knowledge in the individual by the conceptual structure embodied in a person's activity.[3]

Given this two-dimensional scheme of types and levels of knowledge, the distinction between the intrinsic and the instrumental value of knowledge can now be located. This is, first of all, a horizontal distinction that differentiates either two kinds of knowledge or two characterisitics of a particular item of knowledge. Thus the distinction can be used to advance the claim that knowing the population of Boston and knowing Renaissance literature differ as types of knowledge, the first instrumentally valuable and the second intrinsically valuable. Or the distinction can be used to describe different ways in which some particular knowledge is valuable. Thus it may be said that knowing abstract algebra is intrinsically worthwhile because of the pleasure it affords and instrumentally worthwhile because of its use in developing computer programs. Secondly, the vertical location for this distinction is knowledge either in collective or individual use. This is clearly the case when the instrumental value of knowledge is in question since that only appears when knowledge is bent towards some end. But the intrinsic value of knowledge is also only realized when knowledge becomes a part of the experience of individuals or groups. In a derivative sense intrinsic and instrumental value can be applied to knowledge in the abstract since such knowledge can be viewed as having potential use or potential impact on individuals or groups. But this derivative sense must be carefully managed, because imputing intrinsic value to knowledge in the abstract is a step toward idealism.

Questions about the intrinsic value of knowledge are then properly posed as questions about knowledge in use, that is about the worth to an individual or group of knowing *X*. This might seem to prejudice the case against justifying knowledge as intrinsically valuable since the implication is that apart from its use knowledge has no value. But the phrase, knowledge in use, like the phrase, knowing *X*, is used here only to distinguish knowledge as it enters the experience of individuals and groups from knowledge in the abstract. It is an open question whether knowledge in use, or knowing *X*, is intrinsically or instrumentally valuable.

II. THE INTRINSIC VALUE OF KNOWING X

Arguments for the intrinsic value of knowing *X* invoke a severe standard of judgment. Knowing *X* might be associated with a state of affairs which is considered intrinsically valuable, but the relationship between the acquisition of knowledge and the achievement of that state of affairs might be simply instrumental. For example, it might be claimed that knowing *X* gives a person a wide cognitive perspective or helps a person understand the dimensions of life or reveals to the person the marvels of creation. Even if these outcomes are regarded as being intrinsically worthwhile, the knowledge in question can still be viewed as instrumental to these outcomes. For knowledge to be justified as intrinsically worthwhile in itself all instrumental relationships, even those connected with states of affairs deemed intrinsically valuable, have to be bracketed.

The problem with cutting off access to all instrumental purposes of knowledge is that the resulting justifications of the worth of knowledge then run the danger of becoming forms of question begging. Consider a related example. Two possible ways of justifying teaching are that it is a way to earn a living and that it is a way to bring about learning. The first is an instrumental justification of teaching that subordinates teaching to some other good. But the second, which might appear to be a justification of teaching on the basis of its intrinsic worth, is only a partial definition of teaching and is thus not a justification at all. To claim that teaching is good because bringing about learning is good is only to claim that teaching is good because teaching is good. The purported justification fails because it assumes that a description of teaching is sufficient to show its intrinsic worth. A similar problem adheres to justifications of knowing *X* as valuable in itself. Mathematics can be defended as intrinsically worthwhile because it is good to think like a mathematician. But that translates as mathematics is good because mathematics is good. However to say more than that, to say, for example, that knowledge of mathematics broadens one's intellectual perspective or puts one in touch with the intellectual tradition of Western society is already to cross the line of instrumental justifications.

This tendency to give a definition as a justification for the intrinsic worth of knowing *X* suggests a way to interrupt the circularity of such justifications. The acquisition of knowledge always produces some state of affairs. That state of affairs is at least describable, with the proper qualifications, in terms of the knowledge possessed. Thus we can say that a given person now knows mathematics, more or less. But the state of affairs can also be described in terms of anything that is logically connected with knowing *X*. Thus the person who knows mathematics can also be described as having the cognitive perspective that comes from mathematics. Since this cognitive perspective is a logically necessary outcome of knowing mathematics it appears in a complete description of what it is to know mathematics. One strategy for justifying knowing *X* as intrinsically worthwhile is to ground the justification on a logically necessary feature of the state of affairs consequent upon knowing *X*. If anything that is logically connected to knowing *X* is intrinsically worthwhile, then it seems reasonable to argue that knowing *X* is intrinsically worthwhile.

III. THE TRANSCENDENTAL DEDUCTION OF R.S. PETERS

At this point the proper course of my argument would be to show that in principle this way of establishing the intrinsic worth of knowing *X* is unworkable. I suspect this is the case, but I cannot demonstrate that it is so. However, I can point to the failure of this approach in the work of its foremost exponent in recent years, R. S. Peters.[4]

In this approach to justifying the intrinsic worth of knowing *X* the central task is, first, to locate some unchallengeable value and, second to logically connect the possession of knowledge to this value. Peters attempts this with his transcendental deduction that the concern for truth is written into human life. This argument falls into two parts: first, the activity of justification would be unintelligible without a concern for truth; and second, the activity of justification is demanded by the conditions of human life. In order to justify the doing of *X* rather than *Y*, the features of *X* have to be distinguished from those of *Y*. Likewise if a reason is to be given for doing *X* rather than *Y*, some feature has to be discovered in *X* which *Y* lacks and which is relevant to the choice being made. In each case the effort to accurately describe *X* and *Y* evidences the concern for truth, a concern embedded in the original question, why do *X* rather than *Y*. Moreover the task of justification is inescapable; in human life such questions must be raised. To establish this point Peters first offers an *ad hominem* response to anyone who would question the value of justification: the question presupposes the value of justification, or otherwise the question is meaningless. Peters follows this with the substantive claim that human beings live under the demand of reason. Natural languages contain a variety of words like truth, falsity, knowledge, opinion, which give witness to claims of reason on our sensibility. Likewise, assessment is evident in the forms of human behavior that involve conceiving ends, deliberating about them and about the means by which they might be attained. All of this shows the demand of reason under which human beings live and which only the unreasonable person would put off. Peters concludes, "To say, therefore, that men ought to rely more on their reason, that they ought to be more concerned with first-hand justification, is to claim that they are systematically falling down on a job on which they are already engaged."[5] Hence it follows that the concern for truth is a transcendental value that is written into human life.

The weakness I detect in Peters' argument is that, while it may establish an unchallengeable value, namely the concern for truth, the argument fails to provide a basis for logically connecting any particular body of knowledge with this value and thereby does not demonstrate the intrinsic worth of some knowledge beyond its instrumental usefulness. From the starting point of a concern for truth a bridge can be made to the justification of knowledge in two ways. First, the acquisition of knowledge can be viewed as a response to the concern for truth and a means for enabling answers to the question, why do *X* rather than

Y. Second, the procedures of inquiry which are part of the concern for truth can themselves be viewed as content to be learned. But the first of these turns out to be an instrumental justification of knowledge and the second is not a step towards justifying any knowledge at all but only points to a style of human behavior.

In accurately describing X and Y and in discriminating the features of X from those of Y, both necessary preliminaries for a rational response to the question, why do X rather than Y, knowledge of X and Y is obviously useful and in this way seems to have instrumental value. The case for the instrumental value of knowledge is implied when Peters distinguishes cultural activities such as science, history, literature and philosophy, from trivial pursuits such as games. The cultural activities are marked by their cognitive concern and their far-ranging cognitive content. They develop conceptual schemes and forms of appraisal that transform what a person does and change a person's view of the world. They contribute most to the quality of life. If this is the case, cultural activities then seem to be instrumentally related to the acquisition of certain goods: a desirable form of life, the perspective of the educated person, an intelligent assessment of reality. Knowledge, as the sufficient means for realizing these valued objectives, is instrumental to their attainment; and a justification for the intrinsic worth of knowledge has not yet been attained.

Peters denies that the role of knowledge in justifying choices between alternatives makes knowledge merely instrumentally valuable. Rather, Peters finds a "peculiarly intimate relationship" between justification of practical choices and those activities which have a wide cognitive perspective such as science, literature, and history.[6] These cultural activities are valued not because they are useful in justification but because they are the activities in which justification is articulated. While this line of arguement shows promise of relating knowledge to the value of concern for truth, the end result is that the specific content involved in knowing X is lost and no particular knowledge can be justified as worth pursuing for its own sake.

Peters appears to distinguish three different types of relationships among activities. First, there are non-instrumental logical relationships: X is logically related to Y if X articulates or instantiates what Y is. These, according to Peters are strictly speaking not to be interpreted as means-ends relationships. Second, there are logical relationships which can be interpreted as taking a means to an end. In this case the means is instrumental to the end. Learning to read is both logically and instrumentally related to reading George Eliot. Finally, there are the purely contingent relationships, a category that includes causal relationships. Peters contends that the relationship between cultural activities and justification does not fall into this last category: "This process of learning is logically, not causally related, to the questioning situation."[7] But the logical relationship involved is of both the instrumental and noninstrumental variety.

A curious twist in Peters' justification of knowledge appears when he explicates what is meant by a logical relationship which is not of the instrumental type. Peters states that the pursuit of knowledge is in an educational type of relationship to justification. That is, the pursuit of knowledge is related to justification in the same way as the processes of education are to being educated. According to Peters, the processes of education "are not to be regarded strictly as means to being educated, if 'means' is taken as indicating a process which is both valuatively neutral and related to the end purely causally as taking a drug might be related to a tranquil state of mind."[8] Thus an educational relationship has two characteristics: the various components of what it is to be educated are present embryonically in the learning situation, and this content also carries embryonically the values of being educated. The pursuit of knowledge stands in an educational type of relationship to justification in that the processes of learning both articulate aspects of the questioning situation and instantiate the values present in the original situation. Specific studies are thus logically related to justification both as content and as implementation of values. But as it turns out the intrinsic worth of these activities derives from the values they instantiate and not from their specific content. In other words the link between the transcendental argument and the intrinsic worth of knowledge is by way of the values that are found in the justification and in the pursuit of knowledge, not by way of the content that would serve to answer the question, why do *X* rather than Y. The twist in the argument is that in this justification of knowing *X* as intrinsically worthwhile, the content of knowing *X* disappears and only the form of the activity comes to sight.

This move in Peters' thought is revealed when he states that the transcendental argument points equally to the value of knowledge and the values pertaining to the pursuit of knowledge: "Value attaches as much to the attempt to eradicate error as it does to the state of not being in error."[9] Thus even though an answer might not be found to the question, why do *X* rather than *Y*, as long as the answer was sought in a particular way some of the values pointed to by the original question have been realized. The shift from the value of knowledge is completed when Peters acknowledges that intrinsic worth is found in studies only when the procedures of learning actually embody the values implied by seriously posing the original question:

> The point is that value is located in the procedures necessary to explicate what is meant by *justification.* In other words the value is not in the acquisition of knowledge *per se* but in the demands of reason inherent both in answering questions of this sort and in asking them.[10]

The intrinsic worth involved in knowing *X* is thus transferred from the content represented by knowing *X* to the procedures found in the learning process that leads to knowing *X*.

As noted above, the transcendental argument can be used to justify knowledge in two ways, either by showing the value of knowledge in resolving questions of practical choice or by showing the value of particular procedures in the learning process. The first of these appears to establish only the instrumental worth of knowledge, even though such knowledge is logically connected to the task of justification. The second discovers intrinsic value, not, however, in knowledge *per se*, but only in the procedures used to acquire knowledge. Hence Peters' transcendental argument fails to provide grounds on which a body of knowledge could be selected as intrinsically worthwhile and at best only demonstrates the intrinsic worth of pursuing any body of knowledge in a manner characterized by clarity, impartiality, consistency, etc. The question is still left open of what value in itself is the knowledge of history, literature, philosophy, etc. In the argument that Peters constructs these particular cultural activities are intrinsically valuable only becuase they are vehicles for the exercise of reason. But trivial and narrow pursuits could be defended in the same way. Both the study of English literature and counting street corners, when properly conducted, manifest the values of reason, and within the framework of the transcendental argument the only way left to establish the superior value of English literature is by its instrumental usefulness in providing the cognitive perspective that facilitates justifying practical choices.

IV. INSTRUMENTAL JUSTIFICATIONS OF KNOWLEDGE

If this critique of Peters' argument is correct, two courses of action are possible. The first is to maintain the importance of distinguishing between the instrumental and the intrinsic worth of knowledge and to continue the search for an argument which establishes the intrinsic worth of knowing *X*. The second is to abandon that search and to get comfortable with instrumental justifications of liberal and humanistic studies. This second approach seems the more fruitful. This paper concludes with three observations intended to enhance the status of arguments showing the instrumental worth of knowledge.

First, there is no reason to believe that concern for the pursuit of knowledge would lessen if knowledge were justified only on the basis of its instrumental worth. Aristotle made clear in the *Nichomachean Ethics* that it makes no sense to do everything for the sake of something else. But failure to stop the chain of instrumental reasoning at questions about the value of knowledge would not lead to the eventual neglect of tasks connected with the extension, certification, and transmission of knowledge. Knowledge would still be considered an immensely important element in human life, even if that importance could only be instrumentally justified.

Secondly, effective arguments for the worth of knowledge based on its instrumental value depend on overcoming the disjunction between means-ends relationships and logical relationships. If a necessary condition for *X* to be a means to *Y* is that *X* is only contingently related to *Y*, then arguments for the instrumental value of knowledge would be limited to the extraneous uses to which knowledge could be put. The "real" value of knowledge would then have to be found in its intrinsic worth and justifications of knowledge could not avoid that task, its difficulty or futility not withstanding.

But it seems reasonable to hold that means can be logically related to ends in two ways, either as logically necessary to ends or as logically constitutive of ends.[11] The first of these is not particulary troublesome, since, as in Peters' example, learning to read is a logically necessary means to reading George Eliot. But means that are logically constitutive of ends are more problematic. Is understanding a poem a means to the attainment of aesthetic pleasure because it is part of such pleasure? Is a knowledge of history a means to the attainment of broad understanding since it is an instance of such understanding? Peters at this point denies a means-end relationship, but that does not seem to reflect our ordinary understanding of the matter. Consider the person who is interested in getting some exercise and plays a round of golf toward that end. The exercise attained is logically constituted by the characteristics of golf, and golf is thereby correctly seen as a means to an end. Likewise a person may seek the aesthetic pleasure derived from reading poetry. The particular poem at hand constitutes that pleasure and is correctly seen as a means to its attainment.

Thus it would seem that the instrumental value of knowledge can be presented in three different ways: knowledge is contingently related to the attainment of some end; knowledge is a logically necessary means to some end; and knowledge is logically constitutive of some end. Accordingly, "pursuing knowledge for its own sake" can be rendered as "pursuing knowledge as a means that is logically constitutive of a desired end." Thus knowlege is pursued for its own sake when it is part of a desired end or when it instantiates the desired end. In either case the possession of knowledge is instrumental to the attainment of an end, however its instrumentality is based on a logically necessary rather than on a contingent relationship.

The third and final observation to be made here is that arguments for the instrumental worth of knowledge, by distinguishing among the types of consequences that accrue to the person who acquires knowledge, can accomplish many of the same tasks given in educational discourse to the distinction between the intrinsic and instrumental worth of knowledge. As an example of how this can be done, consider the following distinction. The acquisition of knowledge both provides a mental structure and makes interventions in the world possible. Thus the person who knows mathematics has *ipso facto* become a certain type of person, one who perceives abstract relationships. But the acquisition of that same knowledge also satisfies a necessary condition for making mathematical interventions in the world. Hence the possession of knowledge can be considered, first, as providing a person with a particular type of mental structure, and second, as rendering a person useful in a certain way. In each case knowledge has personal consequences, but the consequences differ, one set relating to the mental characteristics of the person who knows, the other relating to the usefulness of a person who knows. Each set provides a basis for arguing the instrumental desirability of knowledge. But the distinction makes it possible to set off those arguments that recommend knowledge on the basis of its social usefulness from those that recommend knowledge because of the type of rationality it provides.

With these observations in mind, the phrase, "the pursuit of knowledge for its own sake," can be interpreted in a way which does not imply the intrinsic worth of knowledge and yet which discovers a value in knowledge other than its instrumental usefulness. First, the phrase points to the logical connection between knowledge and a state of affairs considered valuable, namely knowledge is logically constitutive of that state of affairs. Secondly, "the pursuit of knowledge for its own sake" focuses on the acquisition of knowledge as providing a particular mental structure rather than on knowledge as making a person capable of interventions in the world. Contrary to the suggestion of the Columbia University report noted at the outset, we both train and educate students for something, and in each case knowledge is instrumental to our purposes. Justifying liberal or humanistic studies involves stating those purposes and thereby indicating the states of being that the acquisition of knowledge instrumentally constitutes.

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1. Robert L. Belknap and Richard Kuhns, *Tradition and Innovation: General Education and the Reintegration of the University*, A Columbia Report (New York: Columbia University Press, 1977), pp. 28-29.

2. See Paul H. Hirst, *Knowledge and the Curriculum* (London: Routledge and Kegan Paul, 1974), chs. 3 and 6.

3. These distinctions are explicated by Robert Halstead, "Cognitive Structures and Forms of Knowledge," in *Philosophy of Education 1977: Proceedings of the Thirty-Third Annual Meeting of the Philosophy of Education Society*, ed. Ira S. Steinberg (Worcester: The Philosophy of Education Society, 1977), pp. 203-214.

4. Peters' argument for the intrinsic worth of knowledge can be found in: R.S. Peters, *Ethics and Education* (Glenview: Scott, Foresman, 1967); R.S. Peters, "The Justification of Education," in *The Philosophy of Education*, ed. R. Peters (London: Oxford University Press, 1973), pp. 329-67.

5. R.S. Peters, "The Justification of Education," p. 255.

6. R.S. Peters, "In Defense of Bingo: A Rejoinder," *British Journal of Educational Studies*, 16 (June, 1967), p. 190.

7. R.S. Peters, "The Justification of Education," p. 258.

8. Ibid., p. 241.

9. Ibid., p. 251.

10. Ibid., p. 259.

11. This distinction is developed by Hugh Sockett, "Curriculum Planning: Taking a Means to an End," in *The Philosophy of Education*, pp. 150-60.

RESPONSE TO ROEMER

Jane Roland Martin
University of Massachusetts, Boston

Robert Roemer has done a great service in pointing out to us that the distinction so often invoked between the intrinsic and the instrumental worth of knowledge is untenable; in particular, he is to be praised for showing that knowledge which is claimed to be worthwhile in itself is in fact valued for its consequences.[1] However, in recasting the intrinsic/instrumental distinction as one between two kinds of instrumental relationship and interpreting the pursuit of knowledge for its own sake in terms of instrumental justification involving logical relations, Roemer has tried to preserve elements of the original distinction which we would do well to discard. That distinction has allowed philosophers of education to cut off curriculum theory from its moorings both in empirical fact and in social and political philosophy; it has allowed them to decide what should be taught and learned without examining the consequences of curriculum for the real world and without taking a stand on the kind of life we should live and the kind of society we should live in. I very much fear that Roemer's new distinction encourages these same sins.

Following R.S. Peters, Roemer distinguishes two kinds of instrumental justification of knowledge: one in terms of contingent relationships between knowledge and some outcome (contingently instrumental justification) and the other in terms of a logical relationship between the two (logically instrumental justification). He departs from Peters in that he would classify as instrumental both knowledge which is a logically necessary means to some end and knowledge which is constitutive of some end, whereas Peters would call the latter non-instrumental. Indeed, Roemer wants us to get comfortable with instrumental justifications of liberal studies, presumably because he thinks they are the only kind which will work. Unfortunately, he himself seems to be more comfortable with logically instrumental justifications than with contingently instrumental ones. I say "seems" because I am not sure I understand his final, brief remarks on liberal studies; I think, however, he is assuming that logically instrumental justification will give them the backing which intrinsic justification cannot. I say "unfortunately" because it is this kind of justification which is suspect.

Consider the example which Roemer takes from Peters, namely that learning to read is a logically necessary means to reading George Eliot. It is simply not the case that *learning to read* is a logically necessary means to the end of *reading* George Eliot. Surely it is logically possible for someone to read George Eliot without having learned to read! Whatever the connection between the two may be, it depends on the physiological and psychological endowment of human beings.[2] There may be a logical relationship between *being able to read* and *reading* George Eliot, but this relationship cannot do the job Roemer and Peters want done of justifying particular curriculum content and objectives. Why not? Because, assuming for the sake of argument that reading George Eliot is itself justified, this relationship can at most justify the ability to read George Eliot. But when curriculum is our concern it is not the *ability to read George Eliot* which requires justification, but *learning to read George Eliot*—or, alternatively, *being taught to read George Eliot.*

In general, it does not follow from the fact that the possession of some knowledge *K* is a logically necessary means to some outcome *O* that *learning K* or *having an education* in *K* is a logically necessary means to *O*.[3] Similarly, it does not follow from the fact that possession of *K* is logically constitutive of *O* that *learning K* or *having an education in K* is essential for *O*.[4] In sum, although Roemer is attuned to the ambiguities which often plague discussion of the justification of knowledge, he does not make enough of the distinction between a person having some knowledge *K* and having an education in *K*.

In passing, let me just add that disucssions of curriculum rarely, if ever, make enough of the distinction between the justification of knowledge and the justification of curriculum content and objectives. Robin Barrow, who rejects the attempts of Peters and others to show that some kinds of knowledge have intrinsic value, says: "If mathematics, or anything else, just is worthwhile, whereas dancing or whatever is not, that seems to constitute a good case for putting mathematics rather than dancing into the curriculum."[5] Barrow's point is that claims of intrinsic value cannot be established. He fails to see, as do those who make such claims, that were they to be established the curriculum question would not be answered. If mathematics just is worthwhile, we must still ask, "But *should* mathematics be included in the curriculum?" After all, mathematics might just be worthwhile but, for various reasons, it might be more worthwhile to teach a host of other things. What may be called the educator's Open Question—"Ah, but given that such and such is intrinsically worthwhile, should an education in it be provided?"—remains.

To get back to the issue of the logical and the contingent, suppose that an education in *K* did bear a logical relationship to some outcome *O*. This relationship would be significant only if *O* itself *were* justified. But if *O were* justified, what would it matter if an education in *K* were logically or contingently related to O? Those, like Peters, who want to show that the pursuit of knowledge is worthwhile in itself seem to think that in the context of justification logical relationships are superior to contingent ones. Yet I see no good reason to suppose they are.[6]

One reason I can imagine for preferring logical relationships is that they appear to be more stable than contingent ones. The world changes and, as it does, contingently necessary relationships may become "unstuck." This of course is so, but it is a mistake to think that logical relationships cannot get "unstuck." Roemer's logically instrumental justification is a function of the definitions or analyses given both to some outcome and some knowledge. Even reportive definitions and analyses can change;[7] since the definitions or analyses on which such justifications rest are seldom reportive,[8] there is no reason to expect logically instrumental justifications to be more stable than contingently instrumental ones.[9]

Another reason for preferring logical relationships is that they seem to justify knowledge without going outside it. Systemic justifications have always had great appeal, but it must be remembered that where curriculum is concerned we are outside the system of knowledge from the start for it is not knowledge itself, but the action or policy of providing someone with that knowledge which requires justification. To justify actions or policies one has to go beyond epistemology.

A related reason for preferring logical relationships is that they are the primary concern of philosophy of education as Peters and a number of his associates view it.[10] Yet while their conception of philosophy of education as a second-order activity makes the preference for logical relationships understandable, it does not justify it.[11]

I have already pointed out that if some knowledge *K* is logically related to some outcome *O*, it does not follow that having an education in *K* is logically related to *O*. I need scarcely add that if *O* itself is not desirable, neither having *K* nor having an education in *K* gains justification by appeals to *O*.[12] Roemer does not discuss the justification of the outcomes to which knowledge is related. But for *O* to carry its share of the burden in justifying an education in *K*, either *O* itself or some further outcome O^1 to which it is related, must be justified by reference to purposes and goals and, ultimately, to the kind of life people should live and the kind of society they should live in. Whatever one's conception of philosophy of education, therefore, formulations of even the broad outlines of curriculum content and objectives—which is what most of those who want to justify the pursuit of knowledge for its own sake limit themselves to—will take us beyond knowledge to the realm of the moral, the social and the political.

The preference philosophers of education have shown for logical relationships tends to obscure the fact that curriculum theory and development is a practical endeavor. Since it is, it should come as no surprise that equal time must be given to both logical and contingent relationships. Suppose knowledge *K* is logically constitutive of cognitive perspective *C*, but as a matter of fact people who possess *C* are systematically cruel. Surely we should reconsider our allegiance to *C*. Suppose people who possess *C*, but not attitude *A* and skill *S*, are found to be asocial. Surely we must reconsider our refusal to provide an education in *A* and *S*. Roemer seems to be siding with those who want to justify liberal studies without looking beyond logical relationships. Yet even if there are such justifications, one cannot help but wonder if it is *moral* to divorce the acquisition of mental structures and the like from the empirical consequences of having them. Suppose they are used for destructive ends. Suppose they are used for purely selfish ends.

David Gauthier has argued that moral education should be primarily concerned with the consequences of what we have done, are doing and can do.[13] He may have exaggerated his case, but the relevance of his point for the justification of curriculum content and objectives can scarcely be exaggerated. When we educate people we *do* things. Those who formulate the broad outlines of liberal education, or of education more generally, have the responsibility of examining not merely the logical relations which obtain between knowledge and states of an individual such as cognitive perspective and concern for truth, but the contingent relations which obtain between the latter and both the good life and the good society.

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1. For other valuable discussions of intrinsic justification see J. P. White, *Towards a Compulsory Curriculum* (London: Routledge & Kegan Paul, 1973) Ch. 2; Robin Barrow, *Common Sense and the Curriculum* (Lond: George Allen & Unwin, 1976), Chs. 2, 3

2. Note that learning, at least as philosophers such as Peters define it, is not even a contingently necessary means to the end of reading George Eliot. Some form of conditioning might do the trick.

3. Nor does it follow that if *K* is a contingently necessary means to *O*, learning *K* or having an education in *K* is a contingently necessary means to *O*.

4. As an illustration consider R.F. Dearden's claim that an education in the forms of understanding is essential for a person to be an autonomous chooser because knowledge of history, science, etc. enters into our choices. (*The Philosophy of Primary Education*. London: Routledge & Kegan Paul, 1965, Ch. 4.) I take it that knowledge of history, science, etc. is on Dearden's view logically constitutive of the outcome of autonomous choosing. Yet granting his accounts of knowledge and autonomous choice, it still does not follow that to be an autonomous chooser one must have an *education* in history, science, etc. for the knowledge constitutive of autonomous choosing could be acquired in other ways. (See my *Choice, Chance and Curriculum*, Boyd H. Bode Memorial Lecture 3, Ohio State University Press, 1975, pp. 13-16.)

5. Op. cit., p. 38

6. They also seem to think that relationships of necessity are superior to other sorts, e.g. ones of sufficiency.

7. Israel Scheffler, *The Language of Education* (Springfield, Illinois: Charles C. Thomas, 1960), Ch. I.

8. For a discussion of some which are not see my essay on philosophy and curriculum in the forthcoming NSSE Yearbook on philosophy and education.

9. It is not obvious that in the area of curriculum long term stability is a virtue in any case.

10. R.S. Peters, *Ethics and Education* (Chicago: Scott, Foresman, 1967), Introduction; Paul H. Hirst, *Knowledge and the Curriculum* (London: Routledge & Kegan Paul, 1974), pp. 1-2

11. For more on this point see my review of Glenn Langford and D.J. O'Connor (eds.) *New Essays in the Philosophy of Education* (London: Routledge & Kegan Paul, 1973) in *The Philosophical Review* 85 (1976), pp. 566-69.

12. They might, however, find justification in some other way.

13. "Moral Action and Moral Education" in *Moral Education*, ed. C.M. Beck, B.S. Crittendon and E.V. Sullivan (Toronto: University of Toronto Press, 1971), pp. 145-46.

VALUES, RATIONALITY AND PLURALISM: A PLEA FOR INTOLERANCE

Edward G. Rozycki
Temple University

I. EDUCATED MISCONCEPTION

One outcome of education in the United States is the conviction that a tolerance of even the more aberrant forms of human conduct directly indicates the strength of one's rationality. But that tolerance is not a courage which silently suffers dismay or outrage for a wiser forebearance. Rather, it is a docile "non-affrontability" which easily concedes "different strokes to different folks" as though any difference among individuals excused any difference in conduct. Lack of commitment is sported as the hallmark of philosophical depth and, adopting that modish idiom in which *bad* and *good* become *sick* and *healthy,* the subtly platonized university student is exercised to imagine that evil-doing can be thoroughly rational. Anthropology courses he finds interesting for their presenting "alternative life-styles": coming of age in Samoa he fancies merely a more entertaining variant of coming of age in Scarsdale. Even notorious underwold "families" are to be appreciated as "patterns of culture."

Enthusiasts of similar mind conjure up visions of a culturally pluralistic society that is like a music library offering a variety of scores to suit every taste.[1] Everyone is to freely choose his basic values, to decide to what subculture he will belong.[2] Other pluralists proclaim the discovery of an impressive motive: an innate human need for cultural pluralism.[3] Denying this, it is insinuated, is what causes crime in the cities and pop-culture raucousness.[4]

As a rationally directed, public institution, the school in a pluralistic democracy will serve to promote either assimilation or what I will call "weak rationality." The confusion of notions of tolerance, health and rationality can be expected as an outcome of educational policies aimed at avoiding conflict in a multicultural society: the social control capabilities of public mass education would not be enhanced by the widespread realization that conflict or violence might be the rational means to certain widely valued ends. Consequently, popular notions about the role the school might play in promoting pluralism are ill-conceived. Indeed, rational educational policy may not be at all possible given certain "pluralistic" school goals and the realities of cultural difference.

II. VALUES

I will initiate my analysis in terms of the concept of *value* because the problems of pluralism are often cast as problems with conflicting value systems. It is fashionable to speak of values as things to be had; I will assume that statements of the sort, "Peace of mind is one of Harry's values" can be cast more idiomatically with no important loss of meaning as "Harry values peace of mind." In general, if *A* has the value *X* or—less barbarously—*X* is one of *A*'s values, then *A* values *X*; and conversely. Harry's values are what Harry values. Enough of formulary. Let's consider what one might value: a baby's bronzed shoe, the survival of humankind, personal comfort; also, peace of mind, *Gemutlichkeit*, union with God, feminity, *machismo*, liberation. *Esprit du corps*, orgasm, self-preservation. Not unimportantly, one may value following one's whimsy, indulging one's tastes and surrendering oneself to one's desires. These values may not rank high among such values as sobriety, continence, or other professorial virtues, but they are values nonetheless.

The verb *value* functions much as do the verbs *hate* or *know*; that is, it is not used in its present progressive, except among cultists. The neologism of affective educators, e.g. "John is valuing his privacy," manifests an overly narrow concern with the sensations of individuals and dangerously de-emphasizes the social contexts in which sensations and other episodes of individual experience acquire their meaning as normal indicators of hate or certainty or value.[5] Unlike wanting or desiring, valuing is not an episode in the life experience of an individual, although valuing something usually involves having certain characteristic experiences, especially wanting or desiring the valued object on occasion. But whereas we can say of Harry that he values a good cup of coffee even when he is asleep at the time of our so saying, we would not say of him that he wants or desires a cup of coffee at that time. Harry occasionally wants or desires, let us suppose, a particular new car. We would not say, however, that he occasionally values one. Thus it would seen we can look to explicate valuing as a dispositional concept.

I would note here that distinguishing between wanting (or desiring) as an experiential episode on the one hand, and valuing as indicating a disposition, on the other, is of interest beyond its conceptual nicety: to say that someone has a need is not only to indicate that he lacks something necessary to some further end. It is to insinuate that that end ought to be valued. Harry may need a weapon to commit armed robbery; but that weapon is not one of Harry's needs, even though it be what he wants. Needs assessments are regularly carried out to determine the goals of educational programs. They are done, however, in such a manner as to survey the wants of the target population. The whimsicality of the resultant sample works to undermine rational community participation—and, thus, possible political conflict. This is of considerable practical importance but here must remain unpursued.

Action, belief, and value are intimately connected via the concept of rationality. Believing an indivudual to be rational, we feel warranted in drawing inferences about any one from the other two of his actions, beliefs, and values. On the other hand, if we could accept it that he were irrational, we would hardly expect to comprehend, say, his actions in terms of his beliefs and values. We could well understand a rational person's refraint from pursuing even vehemently espoused values if he believed he lacked either the knowledge, physical ability or opportunity to attain them. Finally, we often refrain from pursuing something valued because this pursuit would gainsay a higher value. Such refraint is rational.

We can schematize the foregone banalities as follows: an individual, *A*, will be said to "actively" value *X* if and only if *A* acts pursuant to *X* provided ***all*** of the following conditions obtain:

1. *A* is rational;
2. *A* believes he knows how to pursue *X*;
3. *A* believes himself physically able to pursue *X*;
4. *A* believes no circumstance impedes his pursuit of *X*; and,
5. *A* believes no higher value is gainsaid by his pursuit of *X*.

This is not intended as a definition. These five conditions, rationality, knowledge, ability, opportunity and consistency, are necessary so that *A*'s pursuit of *X* may be sufficient to imply that *A* actively values *X*, or so that *A*'s actively valuing *X* may be sufficient to imply *A*'s pursuit of *X*.[6]

Now, *A* acts pursuant to *X* if and only if it is *A*'s intent to achieve or maintain *X*, or to gainsay *Y*, i.e. to contradict, undermine or destroy *Y*, where *A* believes *Y* gainsays *X*. Rational action is not merely the selection of efficient means to ends, but also of appropriate constituents to achieve or maintain things valued, or to preclude their being gainsaid.

Since it is active valuing, the pursuit of values, which might cause conflict where values are not shared, certain policy directions can be drawn immediately from the above formulations. If it is a mission of the schools in a multicultural society to forestall conflict between different cultural subgroups, then

a. this mission is served by policies which promote "passive valuing", i.e. some kind of esteeming which does not involve the pursuit of that which is esteemed—typical of so-called "appreciation" courses or of values clarification classes;

b. this mission is also served by policies which gainsay any of the conditions given above necessary to connecting action with value, i.e. the conditions of rationality, knowledge, ability, opportunity and consistency.

Thus, a rational school policy serving the social goal of reduced conflict could promote irrationality, ignorance, incompetence, unequal opportunity, or inconsistency of conduct. Hardly anyone would think such aims educational; our considerations are suggestive, however, as to the persistence of these ills despite continued exhortation to eradicate them.

The concept of valuing laid out above is such that animals do not have values; nor do people so far as they are unreflective. Behaving in such a manner as to cause *X* does not indicate that one values *X*. If we are to be able to distinguish unintentional, inadvertant, accidental, unconscious, or compulsive behavior on the one hand, and deliberate action on the other, we must take care not to confuse values with reinforcers. Inept, ignorant or unlucky people do not value things the less for their failure to attain them. Nor do they value something for their failure to avoid it.

Anything may be valued either intrinsically, or as pursuant to some other valued thing. But unlike wanting, or desiring, all valuing ultimately rests on intrinsically valuing. Thus, the possibility of a politically viable cultural pluralism depends on the possibility of common, or at the very least, intrinsic values compatibly pursued by the different cultural subgroups within a society. An unhappy illustration is that of a bicultural society, half-slave, half-enslaver, in which the value of sheer physical survival is pursued as intrinsic by the slaves and is quite compatible with the pursuit by their free masters of their own continued hegemony.

III. RATIONALITY

To characterize someone as more or less rational is to assess the coherence that obtains between the things he values and why he does what he does in order to achieve or maintain them.[7] It is important that it is the pursuit of things *valued*, not of things *wanted*, that is relevant to rationality. Harry is trying to give up smoking. He believes it aggravates his allergies and that he'll be healthier without it. He is courting a lady who has given him an ultimatum: choose between her or his tobacco. Yet, when the desire grows great enough, Harry manages to get himself a smoke. He hides cigarettes around his apartment and begs them from co-workers. He chews breath mints when his girlfriend comes over. We cannot fault Harry's intelligence in his pursuit of nicotine; yet we can question his rationality given his wider constellation of values.

How are we to distinguish wanting something one values from wanting something one does not value? It will suffice here to characterize a "mere" want or desire as such if and only if:

a. the object of the desire is dispensible to achieving something valued;
b. the pursuit of this object gainsays higher values; and
c. the want or desire manifests itself in certain feelings.

The cogency of such feelings is quite independent of the degree to which their associated object is valued. Despite what is said about a bird in the hand, availability may increase passion, yet not value. Hume was not right when he characterized reason as the slave of the passions. Reason aims at values and valuing is not a passion although it may be done with passion. To value something it is not necessary to experience pangs of desire or the like for it; nor is valuing merely such an experience.

A choice is rational to the extent it is pursuant to something valued by the chooser. I will call *A* "weakly rational" if and only if *A*'s choices are pursuant to things *A* values. *A* is "strongly rational" if and only if *A*'s choices are pursuant to *A*'s intrinsic values ***according to their rank order.*** Harry may be weakly rational because he ignores his intrinsic values when making choices, especially when he is "just doing his job" as a member of some bureacracy. Despite his valuing honesty—intrinsically, let us suppose—he may declare false expenditures on his or his organization's tax forms to lower the amount owed. The school, in promoting weak rationality, does indeed prepare one for life as an organizational functionary. When we allow that Harry has succumbed to temptation, or is merely following "sharp business practice," we recognize that values may be held despite their being, even systematically, gainsaid. But it is only with respect to his personal values that such gainsaying activity casts doubt on the strength of Harry's commitment or rationality—so profound has our moral schizophrenia, our organization-orientation, become.[8]

Coherence is not merely something to be valued or not, but is central to our conception of rationality. The pursuit of multiple ends is less coherent if the actions taken toward them interfere with one another. But one must be careful not to confuse coherence with popular notions of a "general scientific orientation towards life." It is not incoherent, say, for a physicist to believe in God provided he distinguishes types of knowledge. If the pursuit of certain values is restricted to certain times and places, then coherence within a restricted realm does not require either coherence across realms nor coherence in other realms of human endeavor. From the rigor of his logic, one cannot draw any conclusions about a philosopher's moral or religious life.

But the pursuit of strong rationality destroys the compartmentalization of reason by pressing for a single rank ordering of all intrinsic values. Strong rationality is advocated by Socrates with his dictum: the unexamined life is not worth living. Did Socrates seek to subvert Athenian youth? To think not would be to slight his foresightfulness. He urged them to activities which gainsaid their values. Should he have refrained from doing so? Should we refrain from doing likewise? The answers to these questions touch directly on the problems of promoting cultural pluralism.

At various points earlier, we were led to the consideration that it is a plurality of values that threatens conflict; indeed, that coherence is necessary to a broader rationality reinforces this conclusion. But perhaps a plurality, not of values, but of *contexts* might work to reduce conflict: keep religion in the churches and science in the laboratories and there won't be any Monkey Trials. But the school is an arena in which pressures toward a common culture have dissolved those contextual markers by which conflict is avoided. Could a policy in public education of promoting cultural pluralism recontextualize our pursuit of values? Perhaps, provided each cultural group could be restricted to a unique set of characteristic activities: retain kaddish and take pork, too; or trade it for *droit-du-seigneur* or mistletoe.

IV. THE CHOICE OF VALUES

J. Theodore Klein in an article entitled, "Cultural Pluralism and Moral Education", states that a necessary condition for cultural pluralism is that alternative value choices be available throughout society.[9] These choices must be fundamental enough to produce significant differences between people in their attitudes and outlook on the world, yet no so fundamental that they are divisive. One value "implicit in the model for an ideal culturally pluralistic society"—which Klein identifies later as a pluralistic democracy[10]—is that an individual be free to choose his own values. Now, it is clear that intrinsic values cannot be the objects of rational choice except insofar as that choice pursues coherence. But coherence can be pursued only relative to some prior set of values, among which is coherence. That prior set of values can in turn be rationally chosen only if they are not intrinsic, or if some even prior set of values, among which is coherence, exists. And so on, ad infinitum. Thus, not every value is an object of rational choice.

Since making choices according to "mere" wants need not be rational, could people in Klein's ideal culturally pluralistic society choose their fundamental values according to mere wants or desires? Of course, forswearing circumspection anyone can act on the moment to quell a pang of desire. But are such "choices" free? Not if some modicum of reflection, of impulse control, is necessary to human freedom.[11] Even the thoroughgoing hedonist is well-served by reason.

Inasmuch as indulging one's wants may be valued, it too is a value. If we add *indulging one's wants* to Klein's smorgasbord of value options—along with others of its like, e.g. *following one's whimsy*—then we end up with individuals having no basis whatsoever for choice, statistically ideal dice, as it were. Klein has, of course, not such stochastic conception of the individual; his common sense wins out over his need for coherence.

According to Klein, the schools in a democratic pluralistic society will inculcate the following common values: the value of freedom of choice, the value of equality, the value of participation, the value of respect for differences, and the value of cooperation.[12] Klein must be prepared to impose such values on those who at present do not hold them. He may be perfectly consistent in not tolerating a culturally based intolerence; but is that to promote pluralism?

Klein makes certain assumptions about the nature of the individual. His first is that individual needs can be made out independently of values. This assumption makes plausible his picture of individuals choosing each his own values from among the many held by members of different cultural groups: the choice is made on the basis of individual need. But individual needs are not such without prior value commitments: a diabetic kamikaze pilot has no need for insulin.[13] Klein's second assumption is that some grounds for choice exist; given the values he would inculcate, they would. However, I suspect that many, if not most, cultural groups that we know today would not survive the general inculcation of these values. Klein's pluralism is an afterthought to what is at bottom an assimilationist program.

The third and most astounding assumption is that a culture can be neutrally described in sufficiently many of its aspects to provide what is necessary for an informed choice.[14] But in what language will the necessary compendium of descriptions be made? In all? In all dialects, pidgins, jargons and patoix? Or is the question to be begged by assuming a common language? Certainly the many intricacies of non-verbal communication and out-of-awareness culture will be identified, formulated in some language, cross-culturally compared and entered into that vast encyclopedia that every culture-shopper will have to study lest he diminish his freedom of choice by his ignorance.[15]

V. CULTURE CONFLICT

The proponents of cultural pluralism appear to be unaware of two major impediments to their programs: the first is that cultural difference is often profound, extending well below most thresholds of awareness. The second impediment is the general confusion of cultural with ethnic and social class differences. This confusion renders the pluralist an unwitting ally of a mindless, unreconstructed assimilationism, a washed-out Anglo-Germanic Industrial Ethos to variants of which have succumbed even the ruthlessly pursued egalitarianisms of the Soviet Union and China.

Some distinctions made by Edward T. Hall illustrate the depth of incongruity which cultural difference may entail. Culture, writes Hall,[16] exists at three levels: the formal, the technical, and the informal. The formal aspects of a culture consist of those items that are taught explicitly as what is proper and right, or not. They are affectively highly charged and the attitudes inculcated with respect to them are not easily changed. Some examples are these: how and to whom we give deference, table manners, male and female ideals, or proper tone of voice. Cultures vary greatly as to what items are formally taught, e.g., Germans teach their children to shake hands; other cultures explicitly teach mourning behavior, or how to smile.[17] The formal culture provides much of what are the intrinsic values of the group. The technical culture, by way of contrast, deals with the means by which the formal culture is realized. Consequently, though still quite explicit, it is emotionally neutrally taught; its items provide the content of rational instruction. Because these technical items transport easily across cultural boundaries, educators tend to imagine that all cultural items are technical ones. But what may be part of the technical culture of one group may belong to another level of culture of another. The controversy over sex education arises in part from the fact that educators wish to deal technically with what is forbidden in the formal culture of the communities they serve.

The informal culture exists generally out of awareness; most members of a cultural group do not know that it exists and become aware of differences at the informal level only when a violation occurs. Some items belonging to middle-class Anglo White informal culture are these: one keeps one's wrists straight as a sign of masculinity; one may touch a strange male only on the shoulder to get his attention. Using the concepts of English—if that is one's native language—is an important part of the informal culture. This informal culture is "picked up" rather than studied and changes mysteriously: the doll-playing that little boys do nowadays would have been "unmasculine" twenty years ago.

Conflicts can occur when items differ across cultures at any level. Hispanic-Anglo conflicts in the public schools result from differences as to what is considered punctuality, cheating, self-control, proper respect behavior and cleanliness. Hospital staff conflicts occur because doctors—partly to assert authority—treat as formal what nurses see as technical: a nurse may balk at administering a prescribed treatment over a more effective, though less orthodox one. The confrontation of orthodoxy and rationality is paradigmatic of a formal-technical conflict. But we lack paradigms for conflict at the informal level, so informal incongruities are seldom recognized, much less resolved. For example, two cultural groups may agree formally that honesty is good and lack of tact, not. But what counts as forthrightness—a kind of honesty—for Americans, counts as coarse and tactless behavior for Greeks. What a Puerto Rican child thinks is showing proper respect for the teacher, that is, lowering his gaze when spoken to, is taken by the Anglo teacher to be an admission of guilt or shame. When theorists of cultural pluralism seriously begin to consider this kind of cultural incongruity, only then will they deserve our serious attention.

The notion of cultural difference is a problematic one;[18] yet cultural differences is not the same as ethnic or social class difference.[19] American Blacks, for example, are not culturally homogeneous; yet in some politically important respects they are different from both Anglo Whites and Hispanic Blacks. But upper middle class Anglos have much more in common as a class than a difference in ethnicity, Black, White, WASP, Polish, Irish, etc. might suggest. Ethnicity is a socially acceptable form of cultural difference because it involves little if any real cultural difference.[20] Ethnic leaders are leaders precisely because they have been assimilated enough to want to trade off cultural difference for a piece of the social pie. To the extent that other members of their are willing to make similar compromises and get involved politically—although not too rationally so—to that extent will their group achieve ethnic status. The alternative is to risk being treated as deviant beyond the range of acceptable variation and, like the Amish, invite the importunities of the State. Indeed, we can understand theories of cultural pluralism in education as attempting to define acceptable variation, even to the point of sacrificing cultural identity. Randall Collins suggests that the predominant interest behind mass education has been that of social control.[21] But an informed policy of promoting cultural pluralism, recognizing both the depth and range of cultural difference, would undermine efforts towards social control. I am sympathetic towards those who propose that which I have argued is a trivial and incoherent notion of cultural pluralism; but it remains to be seen whether such "pluralism" is not merely a slogan which obscures continued pressures toward assimilation.

When tolerance has become merely an acquiescent indifference, it has ceased to be a virtue. Rather we pursue intolerance, than undermine rational choice. I would wish to have misunderstood those I have ventured to criticize; but where those theorists imagine a cultural pluralism as fulfilling human variety, we can see the homogenization that underlies their smorgasbord of ethnic superficialities. Where they envision human rationality culminating in each person's developing his unique morality, we can discern a moral solipcism that dulls one's sensibilities to injustice.[22] Most dismaying is that these "pluralists" believe themselves innocent of the imposition of values, for they advocate "tolerance". But no one has a real choice who has been rendered unable to reject it.

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1. "Some time in the future, a long, long time from now, when culture is more completely explored, there will be the equivalent of musical scores that can be learned, each for a different type of man or woman in different types of jobs and relationships, for time, space, work and play." Pamphlet *Culture 20-2* of the Multilingual Educational Resource Information and Training Center of Temple University (Phila.: 1978) Mimeograph, p. 6.

2. J. Theodore Klein, "Cultural Pluralism and Moral Education", *Monist* 58 (Oct., 1974), p. 684; also "A Pluralistic Model for Educational Policy Making", *Educational Theory*, 28, 2 (Spring, 1978), pp. 85-89.

3. Seymore W. Itzkoff, *Cultural Pluralism and American Education* (Scranton, PA: American Textbook Co., 1970), p. 91: "Horace Kallen was correct when he hypothesized that cultural pluralism was deeply rooted in man as an intrinsic need and value."

4. Itzkoff, p. 59. Also see pages 17 through 26.

5. Cf. Errol Bedford, "Emotions" in *Essays in Philosophical Psychology*, ed. Donald F. Gustafson (New York: Doubleday Anchor, 1964), pp. 77-98.

6. Only the rationality and consistency conditions bear directly on the biconditional; and consistency is not really distinct from rationality. The formulation is laid out as such, however, for pedagogical reasons.

7. Inasmuch as educational policies are thought to generate some compendium of enjoinders to action in pursuit of supposedly independently specifiable goals, rationality in education tends to be predominantly instrumental with efficiency its measure.

8. Cf. John Ladd, "Morality and the Ideal of Rationality in Formal Organizations," *Monist*, 54 (October, 1970), pp. 488-516. Ladd argues that organizational rationality is necessarily amoral.

9. "Cultural Pluralism," P. 684

10. "A Pluralistic Model,"

11. Edward G. Rozycki, "Are We Free to Choose Our Values? Response to Klein," *Educational Theory* (spring, 1979).

12. Klein. "Cultural Pluralism," p. 691

13. Kallen's notion of an innate need (see footnote 3, above) can't hold up.

14. Developing cross-culturally applicable concepts is perhaps the central problem in ethnographic studies. Cf. Robert A. Levine, *Culture, Behavior and Personality* (Chicago: Aldine, 1973). Also, Edward T. Hall, *The Silent Language* (Garden City: Doubleday, 1959). Also see Chapter 2 of Willard Van Orman Quine, *Word and Object* (New York: Wiley, 1960).

15. Cf. Ray L. Birdwhistell, *Kinesics and Context*, (Phila.: Univ. of Pa. Press, 1970). Erving Goffman, *Relations in Public* (New York: Basic Books, 1971) and *Interaction Ritual* (Garden City: Doubleday Anchor, 1967).

16. *Silent Language*; see also Edward T. Hall, *The Hidden Dimension* (Garden City: Doubleday, 1966) and *Beyond Culture* (Garden City: Doubleday, 1977).

17. Cf. Otto Kleineberg, "Emotional Expression in Chinese Literature", in *Contributions to Modern Psychology*, ed. Don E. Dulany, Jr., Russell L. DeValois, David C. Beardslee and Marian R. Winterbottom (New York: Oxford, 1963).

18. Cf. Levine, for a detailed examination of the viability of the culture concept.

19. Cf. John Singleton, "Education and Ethnicity," *Comparative Education Review*, (Oct., 1977), pp. 329-44.

20. Thomas F. Green in *Education and Pluralism: Ideal and Reality* (School of Education, Syracuse University, 1966), Monograph, names this situation aptly: make-believe pluralism.

21. Randall Collins, "Some Comparative Principles of Educational Stratification," *Harvard Educational Review*, 47, 1 (Feb., 1977), pp. 1-27.

22. Klein, "Cultural Pluralism," p. 687. Klein makes many allusions to Green's *Education and Pluralism*, but remains uninformed by its argument.

RESPONSE TO ROZYCKI

Francis T. Villemain
San Jose State University

Professor Rozicky's subtitle "A Plea for Intolerance" sent me back to a famous English philosopher's letter of some two hundred and fifty years ago. The sentimental journey provided by a fresh reading did suggest a possibly useful approach relative to the matter at hand. Often the interest in tolerance or intolerance is generated by some societal issue. In Locke's case it had to do with the proper authority for civil law and for church-state relations. Another tract comes to mind: Hook's *Heresy, Yes,-Conspiracy, No.* This, of course, was responsive to a postwar cluster of widespread concerns about loyalty, national secrets, and freedom of speech. What was to be socially acceptable and reasonable was not a settled matter, and hence questions about what to accept and reject came to the foreground.

The discussions about "pluralism" that loom up these days I think also have their roots in some tensions and disputes in the social fabric of our period. It is my contention that those substantive social affairs should not be neglected when we try to be reasonable about whether to be tolerant or intolerant of ideas that presumably apply to social circumstances and possibilities. Important as it is to sort out our meanings and to assure that canons of intelligibility are met, these formal philosphic efforts are likely to be illuminated by reference to affairs in the social matrix that probably generated the philosophic inquiry.

May I then identify in overly brief terms what appear to be some of the social phenomena that encourage philosophers of education to critique the concept of "pluralism."

While hardly a new preoccupation and object of scholarship, there is of late a vigorous growth of interest in high places, and even among some philosophers of education, in the problems and opportunities attending the intensification of interdependency between the nations of the world. Two scholars writing under the sponsorship of the Human Rights Task Force of the U.S. National Commission for UNESCO wrote on this point:

> Global interdependence may have become a cliche, but it is also increasingly true. American policy-makers, administrators, curriculum developers, teachers and university instructors responsible for pre-service teacher training will therefore need to give serious consideration to the steps that have to be taken by them to adapt educational policies and practices to this new reality.[1]

Last year, with significant congressional support, President Carter created a Commission on Foreign Languages and International Studies with one of its charges being to recommend "what foreign languages studies are appropriate at all academic areas" with a view to the "improvement of communications and understanding with other nations in an increasingly interdependent world."

What does it mean for educational theory and practice to affirm or deny, to be tolerant or intolerant to cultural "pluralism" in connection with "interdependence" or "global" education? At a national level, do we return AID educational personnel from Nicaragua and not fund educational projects which we have approved for that country, because of the alleged if not proven wholesale violation of human rights so indigenous to our culture and so throughly supported by our rational analyses? In our public schools, do we encourage evaluation of various dimensions of domestic and out-of-country cultures, or do we condemn or ignore those cultures which we reject as intolerable? Indeed, do we have good reason to seek the diminution or suppression of intolerable facets of a given culture? What, for instance, do we say or do about Latin American machismo, whether practiced in the U.S. or not?

Having brought up machismo, permit me to move to a matter of major importance on the domestic scene which I think has intensified our interest in pluralism, namely affirmative action pertaining to education and employment. If machismo runs counter to the affirmative action mandate, should we repudiate this cultural trait of certain peoples and not give preferential treatment to men over women? Would that be consistent or inconsistent with toleration of cultural pluralism? Should ethnic minorities be provided with preferential treatment when applying for entrance to medical schools? Is that to affirm cultural pluralism? If the answer is "no" to each of these, are we being "intolerant of pluralism" and, if so, is it rational?

Perhaps the social matter that most evokes our interest in pluralism was signaled by the U.S. Supreme Court's Lau v. Nicholas decision of the October term of 1973. In this classic case, Justice Douglas, who delivered the opinion of the Court, wrote: "We know that those who do not understand English are certain to find their classroom experiences wholly incomprehensible and in no way meaningful." He said further that "students who do not understand English are effectively foreclosed from any meaningful education." The Court found for Lau relying solely on #61 of the Civil Rights Act of

1964, 42 U.S.C. 2000 d, not the equal protection clause as some believe. The Act bans discrimination based "on the ground of race, color, or national origin" in "any program or activity receiving Federal financial assistance." The Court remanded " the case for the fashioning of appropriate relief."

Then comes the "relief" in the form of Title VII of the Elementary and Secondary Act of 1965, with subsequent amendments in 1976 and 1978, known as the "Bilingual Education Act." Title VII offers the following: "The Congress declares it to be the policy of the United States, in order to establish equal educational opportunity for all children to encourage the establishment and operation, where appropriate, of educational programs using bilingual educational practices, techniques and methods."[2] Attention to this legislation was heightened by the fact that it has been allocated large sums of money. Indeed, I believe the Office of Bilingual Education has over 150 million dollars to distribute during the forthcoming year, not by formula but on discretionary grounds, thus making the fund probably the largest discretionary block of money in the Office of Education. The cultivation of pluralism, its tolerance or intolerance thereto, thus has a very intimate tie to dollars. I call this to your attention for it may temper the level of rational deliberation that is applied to the educational meanings of "pluralism." Indeed, I think I have found ethnic minority groups pitted against each other in the quest for these dollars, and for related positions and salaries in the schools and colleges of the nation. Surely here is a form of ethnic or cultural conflict which in turn is intimately tied to the political life of our nation, since blocks of votes are involved and accordingly seats in Congress. This situation has generated a great deal of rhetoric about "pluralism" which, when placed in context, may be seen as in the pursuit of narrow vested interests rather than scholarly objectivity.

Against this backdrop let us consider some questions. Should we oppose bilingual education because it funds the teaching of English to those of limited English speaking ability and thereby serves as a powerful influence in behalf of "assimilation?" Few would deny that language is a vehicle that conveys and implements vital aspects of the values and modes of operating of given cultures. To encourage and require English, then, is of necessity to generate cultural conflicts, incompatible practices, attitudes, preferences and the like. Should this be tolerated in our schools?

Title VII requires that schools receiving funds under this title conduct instruction in an array of subject matters in the children's non-English language of the home while these children are developing sufficient competence in English to shift to classes wherein all instruction is conducted in English. It is abundantly clear that, when instruction is given in the child's non-English language, in social science, arithetic or one of the sciences, refinements and expansion of their original language must take place. This is sometimes called "reinforcement" or "maintenance." What is our evaluation of the phenomena? Here we are involved in lending support to a major facet of distinctive cultural group: its language. Is this to support cultural pluralism? If so, should we urge Congress to rescind this part of Title VII and just teach non-English speaking children English? However, if we do that it is surely a form of assimilation. Should we refrain from such Americanizing of the young? If so, notice where that leaves us, or rather the children.

Permit me to pursue the area of bilingual education further. Part of the definition of "bilingual education" provided in Title VIII includes instruction of "children of limited English proficiency" that is "given with appreciation for the cultural heritage of such children, and of other children in American society." The act also supports arrangements that will "broaden the understanding of children about languages and cultural heritages other than their own."[3] Here again, we face classroom realities that test our notions of tolerance or intolerance toward "pluralism," for in both instances we have aspects of multicultural education. Do we endorse these phrases in the law or not? Do they promote something desirable or not?

These questions about bilingual education are not put in an idle manner, for any illumination provided may serve to improve my posture as a member of the National Advisory Council on Bilingual Education, a body created by Title VII with the members appointed by the Secretary of the Department of Health, Education and Welfare.

Since this group is charged to submit recommendations annually to Congress and the President relative to bilingual education, we like to think we have the opportunity to make a positive contribution to the education of children in the United States. Your responses could well provide intellectual direction and perhaps influence how dollars are spent. So, while the specifics I identify are mentioned partly to sharpen and test philosophic scrutiny, they could lead to making a difference to what the Commission of Education, the Congress and the President support with major funding.

My assignment, as given by the Program Committee Chairperson, was to provoke discussion and I hope that the legal, financial political, and educational realities which I have identified and placed in juxtaposition with the ideas of "intolerance" and "pluralism" will serve this end. (You will note that I did not balk over Dr. Rozycki's discussion of "intrinsic" values or question which conception of "rationality" we should affirm. For a Deweyite, to avoid such philosophic morsels was a demonstration of restraint.)

May I offer a route to framing a conception of "pluralism" while at once joining Dr. Rozycki with some fervor in most of the criticisms of outlooks he examines. My proposed use of "pluralism" parallels to some extent our familiar ideas about "freedom of speech." we do not tolerate libel or shouting "fire" in a filled theater. Might we not similarly define "pluralism" and what it denotes by linking it to the constitutional framework of a free society? In such a context neither "freedom" nor "pluralism" entail absence of restraints. It seems to me that the procedural protections and rights of a democratic society provide for a great deal of conflict whether economic, political, intellectual, cultural or religious and that such conflict when conducted in authorized ways has been a resource to free peoples. Such a view does, I hope, avoid Dr. Rozycki's properly rejected "moral solipsism" and "mindless unreconstructed assimilations." (I would have used stronger words.) I think it also a common ethical-civic base for dealing productively and more rationally than otherwise, with those domestic and international affairs that feature multicultural dimensions. The latter have come with considerable poignancy to the forefront at this moment in the history of both our country and of virtually all other nations of the world.

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1. Thomas Buergenthal and Judith V. Torney, *International Human Rights and International Education* (Washington D.C.: U.S. National Commission for UNESCO, Department of State, 1976), pp. 148-49.
2. *Title VII-Amendment to Title VII of the Elementary and Secondary Education Act of 1965*, Public Law 95-561, Sec. 702. (a) (7), (1978).
3. Ibid., Sec. 703. (a) (4); (A) (i) and (B).

THE EDUCATION OF THE EMOTIONS

Daniel R. DeNicola
Rollins College

Human emotion is, to some, an embarrassment. They regard our emotional aspect as not fully human; like some grotesque offspring, it should be hidden away in our psychic cellar or gotten rid of altogether. Our emotions (or "passions" or "affections") are powerful, but they may be kept at bay by our fair child, reason. The enmity seems natural: reason represents the orderly, the proper, the Apollonian; emotion is the disruptive, the capricious, the Dionysian. The accomplishments of cool reason may be consumed in the heat of passion. To give vent to emotion is thus to turn irrational and to reveal that one has at least temporarily lost a clear and compelling vision of the rational cosmic order. Such a view is held by Spinoza, for example, who defines a passion as "a confused idea," and who sets a chapter on "the power of the intellect" which he calls "Of Human Freedom" against a chapter on "the strength of the emotions" which he calls "Of Human Bondage."[1] In the same spirit, Marcus Aurelius warns:

> This is the chief thing: Do not be perturbed, for all things are according to the law of nature...
>
> Let that part of your soul which leads and governs be undisturbed by motions of the flesh...let it set a wall around itself and keep those emotions in their place.[2]

To others, emotion is a delight. They prescribe the relaxing of reason in a warm bath of passion. The Romantics see reason as pale, conventional, and imprisoning, while emotion is intense, natural, and liberating. Sometimes, however, this celebration of the emotions is only instrumental, as with the Orphics, who would indulge in frenzied orgies as a sacrament of purification, a ritual catharsis of the baser passions. Yet even these emotional enthusiasts assume a fundamental opposition of reason and emotion.

We have inherited this opposition. It is evident in our partitioning of educational territory into cognitive and affective domains. But we strive to shed old superstitions and seek to stultify neither our passions nor our reason; on the contrary, we champion an education that develops both cognition and affection. Still, despite the on-going acclaim for affective education, talk of "educating the emotions" remains somehow odd, as though the phrase harbors a category-mistake or an ellipsis. Are emotions educable? Can education raise the quality of our joy or regret? How does educated anger, fear, or resentment, say, differ from the uneducated form? This oddity is, I believe, traceable to our persistent misunderstanding of the nature of emotion. I shall first outline the features of an emotion, then discuss several ways of construing "emotive education." My aim is to elucidate and elevate a conception of emotive education that challenges the estrangement of cognition and emotion, a conceptual divorce which has left us, as Scheffler points out, with "unfeeling knowledge and mindless arousal."[3]

WHAT IS AN EMOTION?

Anger, fear, anxiety, regret, joy, grief, embarrassment, resentment, indignation—the emotions are diverse and subtle. They are temporary alterations in ourselves, more fleeting than moods or dispositions. We think of them as feelings, private experiences that "come over" us and submerge our deliberation and autonomy. When a person has "lost control of his emotions" and is "overcome" by them, the implication is that he is not responsible for his attitudes or actions.[4] They well up spontaneously and we undergo them passively. Such is the common image—and the basis of our problem.

Reflect on this example of an emotional experience:

> A man sees a funnel-shaped dark cloud approaching and realizes it is a potentially destructive tornado. He feels frightened. Various bodily changes ensue, including increased strength and rate of heartbeat, paling, gooseflesh, and drying of the throat. These changes are reflected in his bodily sensations, which also include such things as a sinking sensation in the stomach and sporadic local chills. He has strong tendencies to run away and to protect his goods and loved ones, tendencies which may or may not find expression, depending on circumstances. He finds it difficult to think about anything else or to concentrate on the work at hand.[5]

Generalizing from this case, one may isolate five components of emotional states, each of which has seemed the essence of emotion to some theorist. Each component deserves comment.

1. There is an *evaluation*, an appraisal of a specific object, a cognition of something as importantly related to one's desires and values. The dark cloud is appraised as destructive and potentially harmful to one's life, loved ones, and property. This appraisal is clearly not the result of extended conscious deliberation; it is done unconsciously and in a moment. But it is an appraisal nonetheless and its logic is evaluative. Often an emotive appraisal does involve an

overt deliberation, as when one tries to decide whether one should be angry at being mistreated. Evaluations mesh facts and values; they are a species of cognitions. If emotions begin with appraisals, they are to that extent cognitive and manifest one's values and perceptions. Moreover, appraisals even when unconscious are active operations and not happenings which one passively undergoes.

2. There are *feelings* of a specific sort: in this case, feelings of fright. There is in consciousness the presence of a distinctive felt quality which we have learned to call "fear." Such feelings may carry localized somatic sensations such as chills or a sinking feeling in the stomach.[6] A dubious theory holds that such feelings alone constitute an emotion, that different felt qualities distinguish different emotions, and that we intuitively and infallibly recognize these feelings by introspection. This is implausible since our emotions are often "mixed" or complex and it takes a good deal of reflection to sort them out; indeed, misjudging our feelings is a live possibility. In addition, the difference between emotions—between spite and resentment, say—seems to lie not in the feelings proper but in their appraisals or in other components.

3. There occur *changes in involuntary bodily processes and overt reactions,* such as an increase in strength produced by a flush of adrenalin, paling, gooseflesh, drying of the throat, etc. The James-Lange theory reduces emotions to these physiological alterations—and contemporary behaviorists are likely to concur.[7] The primary mistake of this reductionism is that it discards the most significant fact about these physical reactions: they result from and are shaped by appraisals. An injection of certain drugs might replicate the symptoms displayed by the man in our example, yet would we say he was frightened? As Peters has argued, this misguided reductionism causes psychologists to restrict their studies to emotions like anger and fear which have clear and distinct physiological expressions (even in animals) and to ignore emotions like remorse and embarrassment which carry fewer specific overt reactions and presuppose a moral framework.[8]

4. An emotional person has *tendencies to act* in certain ways—to run in fear, to strike out in anger—which may or may not issue in action. "Tendency" is as useful a term as it is problematic. Perhaps it is best understood here as a generalized response pattern, implanted genetically or culturally, which will appear unless rejected or controlled by the agent or prevented by the agent's physical condition or surroundings. We may affirm a man's tendency to flee in fear though he walks calmly to avoid panicking others, though he is drugged and unable to run, though he is locked in his car.

5. Finally, there is a *focusing of consciousness on the object of appraisal* and a concomitant inability to attend to other matters. The fearful man is fixed on the tornado and is unable to concentrate and perform mundane work. Alston characterizes this as "an upset or disturbed condition of mind or body"[9]; Epicurus calls it a "storm in the soul." But these terms are too negative to des-

cribe the mental condition of effervescent joy, profound awe, or simple gratitude.

An emotion is best understood as a structured complex of these five components; it is not, I believe, reducible to one of them. To be angry or joyful or indignant is to make a value judgment which is manifested as a characteristic feeling accompanied by bodily changes, tendencies toward certain actions, and a focusing of consciousness on the evaluative object. The significance of the evaluation to the agent will directly affect the intensity of the other four components.[10]

This interpretation is quite opposed to the conventional view of the emotions as passively received feelings. It is similar to that of Hepburn, who writes that "having an emotion is an active affair, since it involves selective attention, the grouping or interpreting of perceived features of one's situation, and the making of judgments of value."[11] I am unsure of the relation of my position to that of Peters, since I find his account unclear or inconsistent. On the one hand Peters affirms that "different appraisals are largely constitutive of different emotions" and that "emotions are basically forms of cognitions"; yet on the other hand he speaks of "the connexion *between* emotions and distinctive appraisals" and calls an emotion "a passivity" *resulting from* an appraisal (in contrast to motives which may stem from the same appraisal but are linked to action).[12] On balance I believe Peters regards the emotions as consequent to certain judgments, like trailers that are somehow hitched to peculiarly self-involved evaluations, having no remarkable purpose or value. His implicit message is that for better or worse we are saddled with our emotions and should try to make the best of it.

EDUCATING THE EMOTIONS

I now turn to the possibility of educating the emotions, giving *en passant* further discussion of their nature and function. In this section, I shall explore four conceptions of emotive education, presenting each one sympathetically then critically, with application of the foregoing discussion.

1. An emotional person is immature, maladjusted, and often irrational. Such a person is at odds with the world and hampers his self-actualization and his effectiveness in relating to others. To educate the emotions, according to one view, might mean then to learn to suppress them. The central ideal of this interpretation is self-control; its attendant virtues are dignity, autonomy, and gracious acceptance of the inevitable. In educating the emotions, one may learn to curb one's tendencies to act (such as facing up to danger instead of fleeing, or maintaining a well-modulated voice rather than yelling in anger), to improve one's ability to concentrate in emotional situations, and even to reduce the "involuntary" bodily reactions through biofeedback techniques. Most advocates of this form of emotive education want us to go beyond displaying the

outward signs of composure; they want us to cleanse ourselves of the passionate feelings that corrode our consciousness. This is the position of Spinoza, Marcus Aurelius, and Epictetus, who tells us that when we sympathize with a grieving friend we must "Take heed, however, not to groan inwardly, too."[13] The Stoic slave has an ingenious prescription: since emotions are to be avoided, we should, when necessary, alter our appraisals accordingly. "We are not disturbed by things, but by the view we take of things."[14]

The first problem with this interpretation is its distorted use of the term "education." It is incorrect or ironic to say that we are educating something when in fact we are trying to control, suppress, or eliminate that thing. Would we not expect a genuine education of the emotions to involve "transforming and civilizing emotions, rendering them more discriminating, appropriate, reasonable, sensitive"?[15] Clearly this first problem stems from a more basic one: those who subscribe to this position think of the passions in that negative and passive way I earlier rejected. If our education amputates or atrophies the emotions, it bifurcates the person and distorts our common experience.

There is a modified version of this position that does not share this abhorrence of the passions yet retains the aims of self-control, dignity, and autonomy. This version holds that the education of the emotions entails not suppressing them but channeling them into creative and constructive actions. Rather than simply burn with anger, stew in resentment, or wither with grief, the emotionally educated person will produce an aesthetic object, strive for social reform, or otherwise act in a constructive manner suggested by the original appraisal. Thus sublimated, emotions yield motives for positive action. This is a commendable, if limited, aim for affective education.[16]

2. A second possibility is that to educate one's emotions is to become more adept at sorting out and identifying one's feelings, the appraisals they manifest, and their true objects. This is an art that ranges from simple introspection to sustained psychoanalysis. It often requires effort and keen insight, for our feelings are not easily read—even by ourselves. We think we feel hatred, when we really feel fear. We believe we are angry at *A*, when in fact we are angry at *B*. We feel anxious and cannot name the cause. The operative ideal of this interpretation is self-knowledge; its attendant virtues are honesty, self-respect, and integrity. When we analyze our passions we search ourselves to encounter our true values and sources of self-esteem. Surely to become more sensitive to and insightful about one's emotions is an educational aim of importance. However, this interpretation does not foresee a development of the emotions so much as a development of the intellect and the reflective skills. The educational focus is not actually on the passions; they remain pretty much as they were. The real growth is in our introspective ability.

For some, though, this self-knowledge is desirable because it promotes self-control. If we once understand our emotions, they will no longer have the power to "overcome" us. Spinoza adopts this "know your enemy" stance when he states: "In proportion, then, as we know an emotion better is it more within our control, and the less does the mind suffer from it."[17] It is at this therapeutic point that the aims of philosophy and psychoanalysis converge. The difficulty here is the by now familiar misconception of the nature of emotion as a diminishment of human dignity.

3. Another interpretation is that an emotionally educated person has only justifiable emotional states. To educate the emotions is to increase the justifiability of one's emotions—in effect, to rationalize one's passions. This will seem a strange notion if we hold the conventional view of the emotions, but the strangeness vanishes when we realize that the emotions are largely constituted of value judgments. When one is indignant or embarrassed one has cognitions of an evaluative kind, and such value judgments may be justified by submission to relevant criteria. In ordinary discourse we use such phrases as "rightfully indignant" and "overly embarrassed," for example, which imply justifiability.

Analysis reveals there are several elements of an emotion which may be justified. First, there is the appraisal itself, which should be valid and sound. suppose I feel regret for an action I believe I committed but which in fact never occurred. My emotion is *invalid,* hence unjustified. Perhaps I am afraid of certain spiders which are really harmless. My fear is unjustified because its appraisal is *unsound;* my belief that the spiders pose a threat is mistaken. The phrase "rightfully indignant" implies that the constitutive judgment of indignation is both valid and sound.

Second, the intensity and duration of the emotion as exhibited in the feelings, bodily reactions, tendencies to act, and focusing of consciousness may be justified. Proper intensity and duration seem to be a function of the values involved in the appraisal, of the subjective implications of the appraisal, and of certain situational and cultural factors. Just how embarrassed I should be at a *faux pas* varies with the cultural and situational context, the perceived seriousness of my lapse, and the importance I ascribe to the onlookers. Clearly I can overstep the bounds and become "overly embarrassed." At this point my embarrassment is unjustified.[18]

A dictionary will confirm that "contemptible" means "worthy of contempt." When an act is contemptible, it should therefore call forth in us the emotion of contempt, to an appropriate level of emotional intensity and duration. Similarly, that which is enviable, respectable, pitiable, estimable, or venerable should produce envy, respect, pity, esteem, or veneration, respectively, in a rational agent. So embedded in our view of rationality is the justifiability of emotion that it is seen as an indication of insanity to have severe violations of the proper ranges of emotional intensity and duration, and to have abnormal emotive appraisals.

A third factor requiring justification is the form of overt expression given to an emotion. Here the criteria are appropriateness and sincerity. My expression of hatred may be unjustified if indeed I sincerely feel envy. And laughter, for instance, is appropriate to some emotions but not others; if it occurs in a situation in which one would expect grief, despair, or awe, one may seek a justification.

To educate the emotions is, in sum, to rationalize them, subjecting one's appraisals and reactions to relevant criteria and thereby emoting in an orderly and proper manner. The operative ideal of this interpretation is reason; it brings with it the predictability of human behavior, the set of common expectations that makes social relations possible. It is a sound and interesting view, and places emotive education within the larger context of values education and training in deliberation.

4. There is yet another conception of the education of the emotions. We might hope to transform our emotions—not during a given emotional state since they go by rather quickly, but over a span of time—by increasing the sensitivity, freshness, scope, and complexity of our emotions. Just as cognitions of other kinds may be crude and undiscriminating, trite and unimaginative, numbed and rigidly automatic, so may be our emotions. Continuous exposure to the violence and inhumanity of a prison may numb the anger that one should and otherwise would feel. The "canned laughter" used on television shows may contribute to a deadened state of "feeling the way we're supposed to." Anger may sometimes be a crude response to a person's behavior when pity or compassion are more insightful reactions. An aim of affective education, then, would be to reverse the ossification of our emotional system and to develop the range and character of its responses.

This conception is probably more faithful to the idea of education than any of the previous three, for education involves the understanding of alternative possibilities for thought and action along with the skills to evaluate these alternatives.[19] This is precisely what is being proposed for the passions: a growth in one's ability to imagine and express alternative ways of feeling that are fresh and illuminating, and that reveal understanding.

Traditionally the arts have been touted as offering this kind of emotive education. Literature, poetry, and drama, especially, present varied and creative responses to life-situations, with which we can empathize and from which we can learn novel yet appropriate feelings. As with education in other domains, the awareness of alternatives provides a kind of freedom, a liberation from mindless routines and cliches through the capability of imagining and selecting alternatives.

This educational use of the arts is discussed by Hepburn, who says:

> In a sense--in a weak sense--some of these alternatives were open to us before ever we encountered the works of art in which they are set forth; but they are unlikely to become *live* options; our freedom will not become an *effective* freedom until we have a concrete image and a vivid realization of the options: and this art can supply.[20]

Hepburn finds only one worrisome problem in this proposal. We must heed Oscar Wilde's dictum: Life imitates Art. Because of the imaginative power of the arts there is the danger that we will come to draw our emotions secondhand from the arts, or even that we will become absorbed into the world of a single author or school. If we adopt an ideology of the emotions from the absurdists, or the angry artists, or the prophets of doom, we have only vicarious feelings and borrowed judgments. A broad and diversified contact with the arts seems the obvious preventive measure.

THE STATUS OF THE EMOTIONS

We have now surveyed four conceptions of emotive education: (1) the suppression, or better, the sublimation of the emotions; (2) the development of our introspective ability, enabling us better to identify our emotions and their objects; (3) the rationalization of our passions by increasing the proportion of our emotional states that are justified; and (4) the transformation of our emotions, rendering them more vibrant, sensitive, and imaginative. If the first of these is understood as sublimation rather than suppression, all four conceptions are compatible and, in my judgment, all are necessary to form a comprehensive approach to the education of the emotions.

Moreover, a view of the emotions has emerged that is very different from the conventional picture described at the outset. Emotions are primarily cognitions. Their defining feature is an evaluation, and it is the nature of that evaluation that distinguishes one emotion from another. Emotions are justifiable, unlike toothaches and amnesia and waves of nausea and other things that "come over" us. Emotions are, therefore, subject to rational criteria. They may involve considerable conceptual complexity (think of such passions as remorse, indignation, or nostalgia); they function according to rules yet respond to novel circumstances; they can develop from the trite and rough to the imaginative and discriminating. In all this the "affections" seem eminently cognitive, rational, and educable.

This is not to say that we should exult in violent emotion. Nor is it to claim that our passions will never undermine our efforts to be rational. A person with powerful and uneducated emotions is a miserable, unpleasant, and potentially dangerous person. Nevertheless, our subtle and rich emotional capacities are not a curse, an embarrassment, or an indignity. Indeed, it seems our emotions serve important purposes: they signal our consciousness that a self-involved evaluation has been accomplished; they can spur us to action as they yield instinctive reactions and motives; they enhance and reflect moral education; they offer self-knowledge which can be profound; they structure our personal, perspectival worlds—the world as reconstructed by our personal values, biographies, and anticipations. They are, as Solomon has claimed,

> *constitutional* judgments. They do not just *find* interpretations and evaluations of our world...They constitute them. They do not merely *apply* standards of interpretation and evaluation to our experience but in an important sense *supply* them.[21]

And the educated emotions thus represent an extension of human activity into the various possibilities of the world for us, as it takes on different colors and meanings under our imaginative transformations.

Earlier versions of this paper were presented to the Rollins College Philosophy-Religion Club in December, 1977, and to the Southeast Philosophy of Education Society in February, 1978.

1. Benedict Spinoza, *Ethics*, Parts IV and V. The definition occurs in Part V, Proposition III. Spinoza distinguishes passions and emotions—the former being a special case of the latter—but this does not alter my treatment of his views.

2. Marcus Aurelius, *Meditations*, Book VIII, paragraph 5 and Book V, paragraph 26. However, he also adds: "But when the emotions rise to the mind by virtue of the sympathy that naturally exists in a body which is all one, then you must not strive to resist the feeling, for it is natural." Nevertheless, both Marcus Aurelius and Spinoza so truncate our emotional experience—reducing it to serenity or blessed joy alone—that my characterization is justified.

3. Israel Scheffler, "In Praise of the Cognitive Emotions," *Teachers College Record* 79, 2 (December 1977); pp. 171-186.

4. For a sustained treatment of this point, see Robert C. Solomon, *The Passions: The Myth and Nature of Human Emotion* (Garden City, N.Y.: Doubleday & Co., 1976), esp. p. xvii.

5. William P. Alston, "Emotion and Feeling," in *The Encyclopedia of Philosophy*, ed. Paul Edwards (Cambridge, Mass.: The Free Press, 1967), pp. 479-486. This article contains a succinct dialectical presentation of the major theories of the emotions. I have drawn on Alston's analysis in this section but have reordered his list of features considerably.

6. Alston, op. cit., distinguishes between feelings and bodily sensations, then defines the latter as localized feelings. I have dropped the distinction.

7. William James and C. G. Lange, *The Emotions* (Baltimore: 1922).

8. R. S. Peters, "The Education of the Emotions," in *Education and Reason* (Part III of *Education and the Development of Reason)*, ed. R. F. Dearden, P. H. Hirst, and R. S. Peters (London: Routledge & Kegan Paul, 1972), pp. 76-78.

9. Alston, op. cit., pp. 480-482.

10. See Solomon, op. cit., for a presentation of the position that "self-esteem is the ultimate goal of every passion" (p. 96).

11. R. W. Hepburn, "The Arts and the Education of Feeling and Emotion," in *Education and Reason*, ed. Dearden, Hirst, and Peters, p. 95.

12. R. S. Peters, "The Education of the Emotions," in *Education and Reason*, ed. Dearden, Hirst, and Peters, pp. 77, 79. The italics are mine.

13. Epictetus, *The Enchiridion*, paragraph v.

14. Ibid., paragraph xvi.

15. Hepburn, op. cit., p. 94.

16. Peters (op. cit., p. 79ff.) describes this channeling of emotions into constructive action as the changing of an emotion, which is a "passivity," into a motive, which is connected to action. Motives and emotions are, for him, related only indirectly through the appraisal that generates them. This conception provides further evidence for the earlier conclusions that Peters excludes the appraisal from the emotion proper.

17. Spinoza, *Ethics*, Part V. corollary to Prop. III.

18. The Greeks incorporated this ideal of appropriate emotional intensity and duration into the concept of *sophrosyne* ("moderation"). It is Achilles whose heroic wrath exceeds these bounds in the *Iliad* and who is chastised for unjustified and excessive emotion—a form of *hybris*.

19. For a development of this conception see D. R. DeNicola, "The Philosopher, The Teacher, and the Quest for Clarity," in *Philosophical Reflections on Education and Society*, ed. Don Chipman and Creighton Peden (Washington, D.C.: University Press of America, 1978) pp. 267-281,

20. Hepburn, op. cit., p. 98.

21. Solomon, op. cit., p. 194, italics in the original.

RESPONSE TO DeNICOLA

Robert D. Heslep
University of Georgia

Professor DeNicola's paper has two major parts. In the first he presents six conceptual criteria of an emotion; in the second he discusses four specific views of what it means to educate the emotions. The second part seems largely satisfactory as it stands. The first part, however, is a fairly fertile field for discontent.

1. Although Professor DeNicola concentrates, in establishing his conceptual criteria of emotions, upon the constitutive elements of emotions, he does make occasional references to relationships between emotions, moods, and agitations, or upsets. The difficulty here is that he fails to differentiate emotions from these other sorts of mentals. Emotions, he allows, are temporary alterations within us while moods are longer lasting. Emotions, he claims, involve focused states of consciousness but not perturbations of the mind. It might be that emotions are typically shorter in duration than moods, but it is not the case that this is a conceptual matter. If a feeling of love is born by one person toward another for a life's time, that feeling is longer lasting than the moods had by many persons. Moreover, the moods of some people do, as a matter of fact, last only briefly. To distinguish between emotions and moods, then, one will do well to consider some feature other than time. One sharp difference is that an emotion, as Professor DeNicola points out, logically has a cause while a mood, as he fails to note, does not (one does not have to have a causal explanation of his feeling of happiness). Another sharp difference is that an emotion, as Professor DeNicola points out, has an object while a mood, as he fails to remark, does not have one (to feel happy is not to be happy *at* something). Professor DeNicola is quite correct in maintaining that agitations are not factors of emotions, but he does neglect to distinguish between emotions and agitations. After all, upsets are effects as are the feeling factors of emotions and, insofar, are indistinguishable from such factors. One major difference is that agitations, unlike emotions, do not have objects. Another is that upsets, unlike emotions, do not tend to lead to actions (Professor DeNicola's fifth criterion).

2. The first conceptual criterion of an emotion stated by Professor DeNicola involves an appraisal, i.e., "an evaluation of a specific object, a cognition

of something as importantly related to one's desires and values." The sixth criterion mentioned by Professor DeNicola is that an emotion includes "*a fixation of consciousness on the appraisal and its object.*" The difficulty here is that it is not clear that the last stated criterion adds anything to one's understanding of an emotion that was not given by the first one. When one appraises an object, one fixes his consciousness upon it, to be sure. But the appraising and the fixing of the consciousness are not conceptually separate matters: To appraise an object logically presupposes that attention is given to the object. Moreover, when one appraises an object, one is surely aware of the appraisal. But, again, the appraising and being aware of it are not logically separate matters: An appraisal is logically the sort of thing of which there is awareness. It follows, then, that Professor DeNicola's last criterion is redundant. It would have been quite sufficient for Professor DeNicola to have provided the first criterion and omitted the last—unless, of course, he has some special consciousness in mind when he sets forth the last criterion. What that consciousness might be is not at all evident. In any event, if we retain the last criterion, we must concede that the subject of an emotion is not only, by virtue of his appraisal of an object, aware of the object and of his assessment of the object but also is, by virtue of something else, even further conscious of the object and the assessment. But one does not need to be conscious this much, does one?

3. The second criterion of an emotion listed by Professor DeNicola is that an emotion embodies a feeling. This is true, as far as it goes. But what is the nature of feelings found in emotions? Sensations are feelings; so are moods, perturbations, and appetites. Are, then, the feelings of emotions sensations, moods, perturbations, or appetites; or are they a special class of feelings? Professor DeNicola, unfortunately, neglects to take up this issue. Indeed, he leaves his notion of an emotional feeling opaque. It seems arguable that emotional feelings are not appetitive, perturbative, or moodive. Some emotions clearly do not resemble any appetites. And it has already been explained that emotions exclude moods and agitations. Perhaps, then, an emotional feeling is a sensation or something special. The law of parsimony urges one to view such a feeling as a sensation; and, indeed, there are examples which suggest that an emotional feeling is a sensation. To feel fear is to have a sensation of fear, and to feel embarrassed is to sense one's face flush. These examples, however, are only suggestive. It might be that some emotions exclude sensations; or it might be that emotions always embody sensations and feelings of another (and special) sort. In any event, one wishes that Professor DeNicola had examined this issue.

4. The third and fourth criteria presented by Professor DeNicola concern physiological matters. The third is that an emotion includes changes in the involuntary processes of the body and overt reactions of various sorts; whereas, the fourth is that an emotion contains somatic sensations. The difficulty with these stated criteria is that they might not be conceptual criteria of emo-

tions. It might be that they are conceptual criteria of some emotions but not of all emotions, or it might be that they are simply empirical concomitants of emotions rather than logical marks of them. It is generally recognized that one suffers changes in the respiratory and circulatory systems when one becomes a subject of anger, and it is also commonly acknowledged that one suffers a feeling of weakness in the body when one becomes a subject of fear. But it is not evident what changes in the bodily involuntary processes take place when one becomes a subject of resentment; nor is it clear what somatic sensation one has when one becomes a subject of contempt. Yet, even if it is the case that changes in the bodily involuntary processes and somatic sensations always accompany the emotions, it does not follow that they are conceptual criteria of the emotions. For this to follow, it would have to be the case that one cannot understand what an emotion is unless one takes into account the changes in the bodily involuntary responses and the somatic sensations accompanying the emotion. Professor DeNicola, however, has not shown that one has to do this.

5. After setting forth his six conceptual criteria, Professor DeNicola summarizes his position this wise: "emotions are complexes of all these six factors having specific relations: they are focused states of consciousness accompanied by characteristic feelings, sensations, bodily reactions, and tendencies to action, resulting from certain kinds of appraisals." It is to be remarked here that this statement gives no special weight to any of the six factors. Some of them are said to be results and at least one of them is said to be the cause of the former. None of them, however, is said to be more nearly central to the notion of an emotion than any of the others. Nevertheless, in the penultimate paragraph of his paper Professor DeNicola seems to view one factor as more important to emotions than the others. He declares: "The emotions are cognitions. Their first element is an appraisal,... Emotions are justifiable,... this means that emotions are subject to relevant rational criteria. Emotions are themselves rational...."

Given this passage, one is inclined to suspect that, if Professor DeNicola were pressed to explain whether any of his six conceptual criteria is closer to what it means to be an emotion than is any of the others, he would answer that the element of appraisal is. If this were to be Professor DeNicola's position, however, it would have to be regarded as a rather strange one. For one thing, it seems peculiar to say that an emotion is a cognition. It makes sense to say that an emotion is cognitive (in that it relates to a cognition); but it does not make sense to identify an emotion with a cognition. For another thing, it seems arguable that an emotion is a type of feeling. Among the conceptual criteria of feeling, appraisal, and action, the last appears to be the least significant for emotions: An emotion might belong to a person even though he never acts by virtue of the emotion; but an emotion could never belong to a person unless he has a feeling which is directed at an object and which is caused by an appraisal of that object. Between the conditions of appraisal and feeling, it seems clear that the latter is more important for the concept of an emotion; for the significance of the former is simply to explain the latter. Thus, when one refers to a person as the subject of an emotion, one usually is concerned with the person's feelings toward some object but is concerned with his beliefs about the object only if one cares to understand the feelings. It is submitted, accordingly, that an emotion is a feeling of a sort, viz., a feeling which is about an object, which is caused by an appraisal of the object, and which, through the guidance of the involved appraisal, tends toward action.

A MORE FAIR POLICY AND THE LIMITS OF FAIR SELECTION

Frederick S. Ellett, Jr.
University of California, Los Angeles

I.

Is it possible to select applicants for admission to our institutions of higher education in a way which is fair? This question has troubled the minds of educators as perhaps no other question has done in recent years. It may even be true that many people have heard about—and perhaps thought about—the Defunis case and the Bakke case, cases where a quite similar question has been raised in the courts of law.[1] Of course, a proper answer to the question in a sense lies outside the courts, for the question raises what is essentially a moral issue. The question is about not legal, but moral fairness.

In a more just society, finding the answer to the question about moral fairness would be a difficult task. In a society which has been scarred by social injustices, our finding the answer, or at least a reasonable answer, to the moral question becomes a task of enormous difficulty. Nonetheless, it is a task to which all men of good will must attend.

There have been a good number of philosophical essays on the justice (or fairness) of college selection procedures. Philosophical interest in the topic is so great that it is becoming difficult to keep up with all that is being written. In general, the philosophical work has tried to determine whether certain forms of preferential treatment (or reverse discrimination programs) are just and upon what grounds the treatments can be shown to be just. In most cases, the philosophers have argued whether or not preferential treatment should be given to applicants who are black. Some have argued whether or not women are entitled to a form of preferential treatment. Others have argued whether or not other people of certain ethnic (or racial) groups are entitled to a form of preferential treatment. In such cases, the philosophers have been trying to determine whether such policies were just or unjust.[2]

In this essay I intend to consider an extremely important aspect of this general question, an aspect which has for the most part been altogether overlooked. Understanding this aspect of the problem will enable one to understand the limits of fair selection. This aspect involves the way in which empirical predictors can be used to select applicants. Almost all of the writers who have discussed the role of the predictors in selection procedures have been concerned with the predictor's consequences for whites as compared with the predictor's consequences for blacks; in other words, the predictors have been judged according to the principle that they shouldn't discriminate against blacks as a group in favor of whites as a group. A just predictor should not be biased in favor of or against any race, for race should not be a barrier to being selected. The principle of social justice being employed here is a group principle, for it only compares group characteristics.

When one considers the consequences of the predictors for individuals, however, one finds that since the predictors are but roughly accurate, the traditional selection procedure is efficient but only grossly fair.

I will argue that in comparison with the traditional way of using the predictors there is a selection procedure which is more fair. I will argue that such a procedure is to be preferred on moral grounds because it is still reasonably efficient and *yet* more fair. I will also argue that although the procedure is more fair than the traditional procedure, it is itself fair in only the grossest sense. Until we divise better predictors, our success in achieving just selection procedures is likely to be severely limited.

II.

At the outset, let me make it clear that my discussion assumes that there are fewer places available than there are qualified applicants, that there is a scarcity of educational openings. Furthermore, I assume that for certain institutions of higher education it is justifiable to select applicants on the basis of certain qualifications. Therefore, my discussion is not concerned with institutions in which it is reasonable and appropriate to have open admissions procedures or selection by lot from those minimally qualified. Although I can't argue it here, it is reasonable to suppose that such differences in selection procedures are quite proper, given that institutions of higher education serve different purposes. Nonetheless, my arguments will suggest ways in which many of our current selection procedures should be modified at least as a step towards fairness.

It is easiest to understand the problem which arises over the way the predictors are used when the following suppositions are made. First, suppose that we have determined what qualifications should be used to select applicants for admission to a particular institution for higher education. Suppose also that we have constructed perfectly reliable and valid measures of these qualifications. It is customary to call these the *criterion measures*. Furthermore, suppose we have developed the *best* empirical, predictors of these qualifications. It is an important fact that the criterion measures and the predictors have correlations in the range of .4 to .6.[3] One should also bear in mind that educational researchers feel that the alternatives to using tests and past performance as predictors have greater inadequacies at the present time, so that the use of the traditional predictors should not be abolished. The record of validity of such devices as interview, letters of reference, and subjective hunch is a poor one relative to that of the traditional predictors.[4]

I will also suppose that there are no differnces between various groups—such as racial or minority groups—on the criterion measures or on the predictors. If we were to follow the selection procedure which is in general use today, we would use the predictor scores to select the applicants, selecting first those who have the highest scores. I shall refer to this as the traditional procedure.

At this point, one might think that I have "supposed" out of existence all the problems. I grant that my supposed situation lacks many of the aspects which current discussion has taken to be especially important and serious. Indeed, I have explicitly eliminated certain forms of social injustice to groups. What is significant, however, is that an *important* kind of *unfairness* still remains. The selection procedure which selects first those with the highest predictor scores is unfair. I intend to show that there is a selection policy which is morally preferable to the traditional procedure because it is reasonably efficient and yet more fair. As I intend to show, however, such a selection policy is only comparatively more fair than the traditional policy and is fair in only the grossest sense.

III.

I shall begin my argument with a simpler case and then make analogous remarks about the case at hand. Suppose that persons *A* and *B* are in equal need of medicine but that only one unit of the medicine is available. Suppose also that *A's* chances of being cured by the medicine are 100%, while *B's* chances of being cured are 0%. In such a situation, it would be fair to give the medicine straightaway to *A* and not to *B*. After all, if *A* were not around, it would be a waste of the medicine to give it to *B*.

Consider a related case. Suppose that *A*'s chances of being cured by the medicine are 83%, while B's chances of being cured are 80%. In such a situation, one might decide to give the medicine to the person with the *higher* chance of being cured. One could defend this decision by pointing out that if the decision were enacted as policy, then the policy would be likely to cure more people than a policy which did not pick those with the highest chances. It must be admitted that this is a good reason for pursuing such a policy. In comparison with its alternatives, such a policy is likely to be more efficient.

On the other hand, there are good reasons for treating *A* and *B* the same, reasons which are concerned with fairness. And since there is only one unit of the medicine, it would be fair to determine who is to receive it by drawing lots. The reasons for treating *A* and *B* the same are the following. First, there is a practical difficulty because there are errors of measurement. The estimates of *A*'s and *B*'s chances of being cured by the medicine are too close to each other. The differences between *A*'s and *B*'s estimated chances are too small for practical decisions. Since the differences may be due to errors of measurement, it would be unfair to pay attention to such small differences when deciding who should get the medicine. Therefore, *A* and *B* should be regarded as being the same. Secondly, suppose we know that *A*'s chances really are 83% while *B*'s chances really are 80%. Even here it seems it would be fair to treat them as equals. After all, if *A* were not around, it would be a good use of the medicine to give it to *B*. It would surely not be a waste of the medicine to give it to *B*. Considering the importance of receiving the medicine to each of the people and considering the fact that the medicine would be put to good use in either case, it would be fair to regard *A* and *B* as the same. And, again, since there is only one unit of the medicine, it would be fair to determine who is to receive it by drawing lots.

Let us turn now to consider the general situation. It seems that if a person's chances of being cured were below some minimum level, it would be proper to regard giving him the medicine as a waste of the medicine. If a person's chances of being cured were above some higher lever, it seems it would be proper to regard giving him the medicine as a good use of the medicine. If there were several people above the higher level, then it would be fair to treat them as equals. After all, the medicine would be put to good use if it were given to any of those whose chances were above the higher level.

It may turn out that there are many people whose chances of being cured are greater than the minimum level, but less than the higher level. For such people, their chances are not so low that it would be a waste to give them the medicine, yet their chances may not be high enough so that it would be a good use of the medicine to give it to them. After taking errors of information into account, it seems that the following three groups should be formed: (1) The first group would contain those whose chances are above the higher level and those whose chances are within the measurement error of being equal to the higher level. All people within this group are to be treated as equals. (2) The second group would contain those whose chances are below the mimimum level and those whose chances are within the measurement error of being equal to the minimum level. All people within this group are to be treated as equals. (3) The third group would contain all the rest of the people whose chances fall somewhere in the remainder of the middle region. All of these people should be regarded as equals.

In such a situation, there are two *policy decisions* which might be made. The first, policy U, would distribute the medicine to those in the highest region. Policy U would distribute medicine to those whose chances are in the middle region only when all of those in the higher group have received the medicine. In the face of scarcity of medicine, those people in the middle region would probably not receive any of the medicine. Policy U is, in comparison with other policies, more efficient.

There is a second policy, policy F, which comes to this. Given that there is a certain amount of medicine, one should give the medicine to those in the higher group, *except* that one should distribute 25%, say, of the medicine in a fair way to those in the middle group. Policy F is morally preferable to policy U because it is reasonably efficient *and* more fair. Policy F would be reasonably efficient in putting the medicine to good use, yet it would be more fair than policy U because it would give those people in the middle group some chance of obtaining the medicine which has a moderate chance of curing them. Policy F deals with the scarcity of medicine problem in a way which is morally preferable to the dealings of policy U. Although policy U is more efficient, policy F is morally preferable.

IV.

Returning now to the case of college selection procedures, I believe a similar policy recommendation is also defensible. Such a policy, policy F, would be more fair than that traditional policy, policy U, which selects first those applicants which have the highest predictor scores.

As before, suppose that there are many more applicants for admission than there are openings; that is, there is a scarcity of openings. Also, suppose that the predictors of the applicants' qualifications are but roughly accurate. Remember, it has been assumed that the school is using those qualifications which should be used and that perfectly reliable and valid (criterion) measures of the qualifications have been constructed. The difficulty involving fairness arises because our best predictors are but roughly accurate.

In this situation, policy U would distribute college opportunities on the basis of predictor scores. The person with the highest predictor score would be selected first. One could defend this policy by pointing out that it would be likely to offer the opportunities to more qualified people than any other policy. That is, it makes the most efficient distribution of opportunities.

It is important to realize that the predictor's being but roughly accurate has the following feature. Suppose that as a matter of fact the procedure has selected N people who are suitably qualified. It turns out that at least two or three times N people who are suitably qualified have been summarily rejected by the selection procedure. Although policy U is the most efficient because it has the largest ratio of the number suitably qualified to the number of opportunities distributed, it is grossly unfair. For a substantial portion of those who are suitably qualified are never given a chance to obtain the opportunity.

Notice also that the problem discussed here is an instance of a general problem which confronts all of our selection procedures in society. The same limitations which face us in college selection procedures also face us in selection procedures for employment in general. Roughly, it seems to be a fact that our best predictors are, at best, only grossly fair. This feature of selection situations presents a quite serious challenge for those who aspire to realize just institutions.

Although the predictors are but roughly accurate, the predictors can be used in the creation of a policy which is more fair than policy U. It is helpful to use the predictors to tell us the applicant's chances of meeting the qualifications. In a fashion similar to the scarcity of medicine examples, if an applicant's chances of meeting the qualifications were below some minimum level, then it seems it would be proper to regard giving him the opportunity at a college education as a waste of the opportunity. On the other hand, if the applicant's chances of meeting the qualifications were above some higher level, then it would be proper to regard giving him the opportunity as a good use of the institution's resources. If there were several people above the higher level, then it would be fair to treat them as equals. After all, an opportunity would be put to good use if it were given to any of those whose chances were above the higher level.

Now it is quite likely that there are many people whose chances of meeting the qualifications are greater than the minimum level, but less than the higher level. For these people, their chances are not so low that it would be a waste to give them the opportunity, nor yet so high that it would be a good use of the opportunity to give it to them. After taking into account the errors of information and making the three-part classification of the middle region, as in the medicine example, the (more) fair policy F will give attention to those in the middle region. In particular, given that there is a scarcity of opportunities, the policy would give the opportunities to those in the high group, *except* that it would distribute 25%, say, of the opportunities in a fair way to those in the middle group.

The policy F is morally preferable to the policy U which gives the opportunities to those with the highest scores for the following reasons. Policy F would be reasonably efficient in putting the institution's resources to good use, and yet it would give those in the middle groups some chance of obtaining an opportunity which they have a moderate chance of using profitably. The policy would be reasonably efficient *and* more fair. Although policy U is more efficient, policy F is morally preferable.

Clearly, the determination of what are the minimum level, the higher level, and the percentage of opportunities to be set aside for the middle group will rely upon intuitive and informal judgments. It is hoped—and I believe—that people can come to agreement about such things and that they can agree that these judgments are reasonable. It would be foolhardy to deny that the task is a difficult one, but it must be seen that the task is worth pursuing. Insofar as we value treating people in the fairest way possible, pursuing this task is likely to be worthwhile. Although some of our institutions of higher education are legitimately concerned about using their resources *efficiently*, nonetheless our institutions ought to strive to treat people humanely—and in particular to treat people fairly. The policy I have recommended is one which is reasonably efficient and is one which is *more fair* than the usual policy. Perhaps it is unreasonable to expect or to demand that our institutions achieve perfect fairness. It is not unreasonable to expect and to demand that our institutions adopt a policy which is a good step towards fairness.

Although policy F is more fair than policy U, those who are interested in just selection procedures should be aware of how much policy F leaves to be desired. Although policy F is more fair than policy U, policy F is itself only fair in the grossest sense. Given our present expertise in devising predictors, our success in achieving just selection procedures is likely to be severely limited.

One more comment, a general one. Implicit in my argument is the claim that what is morally good or justifiable cannot be identified with that distribution which results in the most efficient distribution of goods. Although morality is concerned with distributions which are reasonably efficient, it is also concerned with expanding the opportunities for people to participate in the activity even when the resulting distribution may not be maximally efficient. In particular, moral fairness seems concerned with giving human beings *the opportunity* to achieve a good outcome. I have, in effect, tried to argue that a policy need not be maximally efficient to be morally preferable. It could be reasonably efficient and more fair than its alternatives, and therefore, it would be morally preferable. Fairness may not be of absolute moral weight, yet in certain situations its weight may be enough to tip the scales in favor of a certain policy.

V.

In recent years considerable discussion has been given to whether it is possible to select applicants for admission to our institutions of higher education is a way which is fair. The Defunis and the Bakke cases represent well the kinds of issues which arise when one tries to answer such a moral question. Answering the question is made all the more difficult because out society has been scarred by social injustices.

In this essay I have dealt with an extremely important aspect of this difficult question, an aspect which for the most part has been overlooked. This aspect involves the way in which the predictors can be used to select applicants, predictors which turn out to be but roughly accurate.

I have argued that the traditional selection procedure which selects first those students with the highest predictor scores is likely to be more efficient than other procedures. I have argued, however, that there is a selection procedure which in comparison with the usual procedure is reasonable efficient *and* yet more fair. I have argued that this policy is *morally preferable* to the usual policy because it is reasonably efficient while being *more fair.* Fairness may not be of ultimate moral value, but in this case the fact that the policy is reasonably efficient and more fair than the usual policy makes it the preferred one.

I have also argued that in light of our present expertise in devising the predictors, policy F's being more fair than policy U should not mislead us. Although policy F is more fair than policy U, policy F is itself fair in only the grossest sense. Until we devise better predictors, our success in achieving just selection procedures is likely to be severely limited. Whatever our solution to the total problem of fair selection, the issue and recommendation discussed here must be part of it.

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1. *Defunis v Odegaard,* 416 U.S. 312, *Bakke v the Regents of the University of California,* San Francisco, 23311.

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RESPONSE TO ELLETT

Arturo Pacheco
Stanford University

Professor Ellett's argument is rather straightforaward and there is little need to summarize it. He is correct in raising some important questions about an often overworked aspect of traditional selection procedures. Ellett's argument drawn from an analogy to medicine does illustrate the importance of this aspect, and it as well illustrates the limits of fair selection in a meritocracy, even with an alternative and *more fair* selection procedure. Although there are major unresolved difficulties with the use of empirical predictors, Ellet does us a major service in pointing out that even if we had very excellent and reliable predictors, critical problems of fairness would remain in determining policies for selection which would be fair. Ellett is to be applauded for this service.

In terms of the novel and interesting way in which Ellett argues for an alternative selection procedure which is more fair, I have three types of critical comments to make: (1) the first concerns some difficulties with Ellett's notions of *fairness and efficiency* (2) the second raises a question about the usefullness of the analogy to medicine; (3) and the third raises some problems internal to Ellett's alternative selection policy.

Fairness and Efficiency

Ellett is just not clear or explicit enough in delineating his notions of fairness and efficiency. Although he constantly frames his arguments in terms of what is *more fair,* we never have an explicit statement of what fairness is, or the principle upon which it is based. This is further complicated throughout Ellett's argument by his failure to make clear the connection between fairness and efficiency. Ellett wants to argue that a policy that is *reasonably efficient* and yet gives some chances to a larger group is *more fair*, yet at the same time he claims that "what is morally good or justifiable *cannot* be identified with that distribution which results in the most efficient distribution of goods."

Ellett needs to make more clear the connection (if any) between efficiency as a principle and fairness as a principle; he seems to want to go in two directions. For example, in the first illustration that he uses in the analogy to medicine, Ellett argues that it would be more fair to give medicine to person A (with 100% chance of cure) than to waste it on person B (with 0% chance). Isn't this argument from waste an argument for fairness in terms of efficiency; (Ellett also supposes that A and B are in equal need).

The Analogy from Medicine

I next want to raise only a brief question about the analogy itself. How much is distributing medicine on the basis of the calculation of chances for cure *like* the distribution of educational opportunities on the basis of scores on empirical predictors. One surely has a sense that the one is much more simple than the other. For example, while we might be able to speak of 100% chances of cure with medicine, can we *ever* speak of 100% chances of success with education on the basis of empirical predictors? No, we know that there are too many other factors which complicate the situation in education.

This complication actually further supports Ellett's contention that the traditional selection system (based solely on empirical predictors) is grossly unfair.

Problems with Ellett's Alternative and More Fair Policy F

In Ellett's alternative policy, the confusion over fairness and efficiency remain. In defending Policy F with regard to medicine, Ellett says that Policy F is morally preferable on two grounds:

1. It is "more fair than Policy U because it would give the people in the middle group some chance of obtaining the medicine which has a moderate chance of curing them;"
2. "Policy F deals with the scarcity of medicine problem in a way which is morally preferable to the dealings of Policy U."

I have two questions here. Are these, in fact, two separate justifications? Isn't Ellett arguing that Policy F is morally preferable because it is morally preferable?

There are other problems which surface with Ellett's alternative selection procedure. Problems of distribution remain. Ellett doesn't tell us how we are to pick individuals from the higher group, to which 75% of the spaces have been allocated, or from the middle group to which 25% of the spaces are allocated; we are only told that it must be done in a fair way. Do we presume drawing by lot?

Nor are we provided with guidelines for determination of the dividing line between the higher and middle groups, nor for that minimum line below which no opportunities are to be distributed. Nor are we provided with the criteria for determining the percentage of opportunities to each group.

Ellett recognizes some difficulties here, but tells us only that we are to rely on intuition and informal judgment, and hope that institutions will be concerned with treating applicants as humanly as possible. While noble, this is not very helpful to the problems at hand.

My last related point has to do with how much the question of fairness is settled with the new selection procedure. Depending on where the demarcation line between the higher and middle groups is set, one can imagine a range of distributions from a nearly equivalent chance of getting an opportunity, regardless of whether one is in the higher or middle group, to a very great disparity in having an opportunity. I will illustrate with an example: Imagine two different distributions of 500 suitably qualified applicants (all above the minimum) for only 100 spaces in a medical school.

	400	75/400	3:16
x			
	1[illegible]0	25/100	1:4
y			

A

	100	75/100	3:4
x			
	400	25/400	1:16
y			

B

In the first case there are 400 students in the higher group and 100 in the middle group. In the second distribution (B), there are 100 students in the higher group and 400 in the middle group. Also imagine that we are using a 75%/25% distribution of spaces in both cases, with individuals who fall within each group (high or middle) being treated as equals.

In the first distribution (A) which has 400 students in the higher group vying for 75 spaces (75% of 100), one's chances of getting a space are 75 out of 400, or 3:16. For the 100 students in the middle group, one's chances are 25 out of 100, or 1:4.

In the second distribution (B), there are only 100 students vying for 75 spaces, hence, one's chances in the higher are 75 out of 100, or 3:4. In the middle group, however, there are 400 students vying for 25 spaces, and one's chances are now only 1:16. Here, it makes a great deal of difference which group you are in, with 3:4 chances in the first case, compared to 1:16 in the second.

The point of this illustration is to show that the questions which Ellett leaves unanswered are crucial ones, and have much to do with the notion of fairness. Under distribution A, persons in the higher group are surely going to claim unfairness, snice their chances are actually less than those in the middle group. Under distribution B claims of unfairness are also likely to arise, this time by those in the middle group claiming that the disparity of chances between themselves and those in the higher group is too great (1:16 v. 3:4).

Were the possibility not precluded by a statement early in Ellett's paper, to the effect that his "discussion is not concerned with institutions in which it is reasonable and appropriate....(to select) by lot from those minimally qualified," I would be moved to suggest a friendly ammendment to Ellett's alternative policy, which would address some of these difficulties. Were the demarcation line between higher and middle groups removed completely, with everyone above the minimum treated as equals and selected by lot, everyone's chances would be the same, 1:5. This distribution, too, would be reasonable efficient and reasonably fair. Why Ellett rules out this type of procedure at the outset raises some interesting questions about the overall possibility of fairness (even in terms of treating people as humanly as possible) in what remains a meritocratic scheme.

INFORMATION PROCESSING APPROACHES TO COGNITIVE STRUCTURE: NEW LOOK OF EDUCATIONAL RESEARCH OR DEGENERATING PROGRAM?

Lynn Sargent De Jonghe
Cornell University

In recent years information processing approaches to cognition have all but eclipsed behaviorist approaches to the study of higher forms of cognitive activity such as learning. This shift in thinking has had a widespread effect on both the form and content of educational research. It has influenced not only the types of questions educational researchers will permit themselves to ask, but also the methodological tools they will use in answering these questions. There are also distinct social ramifications of this intellectual shift. Anyone attending a national meeting of the American Educational Research Association can easily sense that the information processing experts—particularly those well versed in the intricacies of computer technology—create the impression of exerting the dominant intellectual force within the educational research establishment. It is no wonder then that these are the individuals who are inspiring new work in curriculum research and development.

To be sure, the dominance of information processing has not been accepted without some debate. Resistance to this trend has come largely from three groups of educational researchers: from those who remain determined to cleave to traditional behaviorist theories, from social activists who are committed to particular outcomes of educational programs, and from theoreticians who argue that the key issues of educational research should center on the unique social demands of the teaching/learning situation. Just recently, however, there has been murmuring from another quarter as well: from leading psychologists who were once champions of information processing but who have grown disillusioned with the approach. An excellent case in point is that of Ulric Neisser, an early leader in information processing theory, who has recently called for an abandonment of computer modeling of cognitive structures.[1]

At stake in this debate are several key epistemological issues which lie largely submerged at present. I should like to raise some of these issues now. I propose to begin this venture by sketching the origins of the interest in information processing research on cognition and by reviewing the key philosophical argument in support of the efficacy of this approach to the study of cognition. Next, I shall discuss some problems which are suggested by this line of argument when it is applied to actual research situations. I shall suggest that the epistemological defense of information processing research rests on the functionalist account of psychological theory, which has been put forth in greatest detail by Jerry Fodor. I shall further suggest that this account suffers from circularities which severely threaten the theoretical validity of most information processing research on cognition.

I. ORIGINS OF INTEREST IN THE INFORMATION PROCESSING APPROACH

In the late fifties and early sixties, when psychologists began to apply aspects of informational theory from fields such as computer programming and systems analysis to problems of cognition, behaviorism had been the dominant source of psychological theory for some thirty years. To cognitive psychologists frustrated by the limitations of paired associate learning, it had become increasingly apparent that somewhere in the analytical dissection of cognition the subject itself was being destroyed. As thoughtful psychologists began to seek out alternatives to the behaviorist view of cognition, early non-behaviorist approaches to cognition were reevaluated with new respect, and the work of Bartlett on memory, Koffka on perception, Koehler on problem solving, and Piaget on development was repopularized. Many psychologists during this period became attracted to the advantages of applying the science of computer technology to the study of cognition, and treating mental processes as functioning similarly to the program of a computer. Not only did systems analysis provide a new way of conceptualizing the components of complicated cognitive processes like memory,[2] but also information processing provided psychologists with an epistemological alternative to behaviorism. As Neisser wrote in 1967: "Most important is the philosophical reassurance that it provides: Although a program is nothing but a flow of symbols, it has reality enough to control the operation of very tangible machinery that executes very physical operations."[3]

To be sure, the philosophical support of information processing research is considerably more complex than Neisser's statement would suggest. This defense, which was then being worked out by philosophers such as Fodor, constituted part of the larger philosophical attack on empiricism being waged at that time. But the point is that psychologists were not only aware of these problems, they also felt obligated to recognize their constraints. The philosophical and psychological attacks on behaviorism came at the same time. Each nourished the other.

II. THE EPISTEMOLOGICAL DEFENSE

The key to the philosophical defense of the information processing approach lies in the argument for functional equivalence which has been worked out in greatest detail by Jerry Fodor. While the fullest exposition of these views can be found in his book *Psychological Explanation,*[4] an excellent skeleton of the argument appears in his 1965 essay, "Functional Explanations in Psychology."[5] Since these arguments were developed to provide an answer to behaviorism, perhaps it might be wise to review them within the context of the behaviorist orientation.

For the behaviorist and the non-behaviorist alike, it is the explanation of the unobservables of causality that is problematic. A standard empiricist method for dealing with this dilemma is to proceed as if theories involving terms referring to unobservables were simply predictive instruments. This is *instrumentalism:* the view that unobservable theoretical terms are merely dummy variables which have no meaning beyond the observables which they predict. Since such theoretical terms possess no meaning beyond their predictive power, if one is going to be rigorous about using such terms, he should have some method for insuring that he does not lapse into using the terms as if they referred to real entities. Thus *behaviorism* further holds that every nonobservational term must be at least capable of being defined in terms of observables—that is, such terms must be analyzable in terms of behaviors.

Fodor's strategy is to attack both behaviorism and instrumentalism by differentiating between two logically distinct types of explanation: mechanistic explanations and functional explanations. The functional account says what something accomplishes; the mechanistic account says how it does it.[6] While mechanistic explanation involves analysis in terms of behaviors, functional analysis does not. In fact, the set of mechanisms capable of realizing a given function is indefinitely large. A can opener opens cans. That is its function. But the specification of the mechanisms which may achieve this function is a constant source of inspiration to gadgeteers. A can opener may consist of a simple piece of steel with a bent point; or it might consist of an elaborate combination of electrically driven clamps and gears and cutting blades.

Fodor argues that psychological terms such as "desires," "strategies," and "motives" are properly characterized as functionals and as such need not be reducible into observational terms. He argues that psychological explanation is thus a two-phase process. The first phase of the process is "the development of a theory of internal states of the organism such that (a) the terms of the theory which do not refer to behavior are functionally characterized, and (b) the theory is capable of adequately predicting the behavior of the organism given the knowledge of the current stimulus situation."[7] The second phase involves the explanation of the physical mechanisms which produce the mental states described by Phase I theories. Phase I explanations, then, can be thought of as rules that permit the generation of a large set of mechanistic models. Which particular model best approximates the organism in question is a task for Phase II.

There are several aspects of Fodor's word choice in describing this two-phase process of theory building that deserve underscoring here. Of Phase I theories, Fodor says that all the terms which do not refer to behavior must be functionally characterized. This first stage of theory building thus involves the relationship of functional descriptions of psychological states (unobservable) to behaviors (observables).[8] Fodor further indicates that the function of Phase I theories is to *predict* (rather than to explain or specify) particular behaviors. This suggests that although the functional states described by Phase I theories are assumed to have an identity beyond that of behavior prediction, the *theory* itself is to be taken *predictively* only in this phase. The second stage of theory building involves description of the causal mechanisms (physiological movements which presumably would be observable in some fashion). If the second phase of theory building were completed, the first-phase theories involving functional descriptions of psychological states would be redundant. Psychology would be reduced to physiology.[9] Fodor is careful to point out, however, that Phase I theory building and Phase II theory building must go hand in hand. This interdependence of Phase I and Phase II theory building proves to be the fly in the ointment of Fodor's account of functionalism.

The distrubing effects of that fly reveal themselves in several problematic aspects of Fodor's argument. First, it is not entirely clear just what functional equivalence is. Second, although Fodor's argument allows us to relax our concern with distinguishing psychological reality from the physical instantiation of mental states in the brain, it saddles us with rigorously maintaining another distinction perhaps even more difficult to make in research practice: the distinction between functional and mechanistic analysis. Third, Fodor's account would seem to provide little guidance as to how the interplay of Phase I and Phase II theory building can provide adequate constraints on the generation of Phase I hypotheses. I should like now to discuss these difficulties in relation to some of the ongoing work in information processing research.

III. DEFINING FUNCTIONAL EQUIVALENCE

The first task is to tackle the question: just what is functional equivalence? The classic example of functional equivalence is that of two computers with different input, storage and retrieval systems and each programmed to perform an identical task — for example, the ability to recognize shapes. The software serves an equivalent function although the mechanisms of the hardware are quite different. The argument goes that if it is possible to construct functionally equivalent programs for any two radically different computers, then it is at least theoretically possible to construct a machine program which is functionally equivalent to any given aspect of human cognition. Now this may sound very appealing to the student of cognition, particularly to one who is intrigued by the challenge of computer modeling. However, the definition of functional equivalence soon runs into difficulties of both a qualitative and a quantitative nature.

Fodor has recognized some of these difficulties in his book, and has taken some pain to address himself to them, albeit without complete success. He is careful to point out in his introduction what functional equivalence is *not*. First, it is not the "interpretation of statements such as 'Q is the function of X' in terms of strictly causal statements in the form of 'X is empirically necessary for Q'."[10] As Fodor says:

> We know that biological states and structures often have adventitious consequences that have little or nothing to do with those of their effects that the biologist wishes to identify as their functions. If the presence of chlorophyll is a necessary condition both for photosynthesis and for green coloration, what grounds do we have for saying that the function of chlorophyll is to permit photosynthesis and not to provide green coloration?[11]

Second, it is not enough to say that functionally equivalent systems produce the same state of affairs. The problem here is that this definition "appeals to a concept of 'same state of affairs' which is as vague as that of 'sameness of function.' "[12] Third, it is not enough to say that functionally equivalent systems are those whose effects are indistinguishable, because this criterion "presumes that the states of affairs upon which functionally equivalent systems converge need not be functionally defined themselves."[13] Instead, as Fodor points out, "given the limitations of our current knowledge about the mechanisms producing mental states, there is no such reason to believe this."[14] Now criticisms 2 and 3 taken together appear to create a devil or the deep blue sea dilemma. On the one hand, any attempt to define functional equivalence except in terms of exact behaviors will produce a definition too vague to be meaningful. On the other hand, the reason for defining the state functionally in the first place was to avoid the behaviorist limitation of having to express psychological states solely in terms of behaviors.

In the final chapter of his book, Fodor gingerly attempts to slip between these hazards by defining functional equivalence as follows: "Phase I theories postulate functionally equivalent systems when and only when they postulate constructs the behavioral consequences of which are in theoretically relevant respects, identical."[15] Notice that although he couches functional equivalence in terms of behavioral identity, he specifies that the role of that behavior is to represent only the product of the theoretical implications of the constructs, which themselves are functionally defined. By this maneuver he hopes to save the independence of the meaning of the construct from that of its behavioral consequences. But his definition still raises the question of how we may depend on our theoretical assessment of these behavioral consequences, if Phase I theories are permitted only to predict (rather than to explain or to specify) actual behaviors. Unfortunately, it would seem that the theoretical implications necessary to the definition of functional equivalence could be understood in predictive terms alone.

These difficulties of describing the qualitative characteristics of functional equivalence render more problematic the quantitative difficulties of defining functional equivalence. For one thing, it is unclear how broad the equivalence must be for functional equivalence to be claimed. Suppose that the pattern recognition programs of machine 1 and machine 2 are equivalent with respect to the recognition of the letter A and triangles only. Suppose, for example, that machine 1 used the same program to recognize all shapes and letters, while machine 2 treated these particular shapes using a radically different program from the one it employed to recognize all other shapes. Are we justified in claiming functional equivalence in the cases of letter A's and triangles, even though the recognition routine represents the standard strategy in one case and a radical anomaly in the other case? A second question involves just how fine grained the specification of the "theoretically relevant behaviors" must be to qualify for functional equivalence. Suppose one machine scans at a rate of 300 lines per frame while the other scans at a rate of 600 lines per frame. If we specify tolerance at the 300 line level, we would claim equivalence, but if our tolerance is at the 400 line level, then presumably we should deny the equivalence.

Fodor attempts to address such questions by postulating a case of weak functional equivalence and a case of strong functional equivalence. A machine may be said to be "weakly equivalent to an organism in some respect when the behavioral repertoire of the machine is identical with the behavioral repertoire of the organism in that same respect."[16] I take this to mean that any two successful programs for the recognition of triangles would be considered equivalent regardless of whether the strategies for recognition were markedly different. This form of functional equivalence would seem to be very weak indeed—so weak, in fact, as to be of little interest to those concerned with learning how human cognition functions. Notice also that this notion of functional equivalence does not successfully deal with the issue of how fine-grained we should make our criteria. Assumably any two programs which achieved 100 percent success with triangle recognition would be considered equivalent. However, if both machines were only 80 percent successful, and if the mistakes generated by the two programs were of a markedly different nature, then we should probably deny the equivalence. But Fodor's definition gives us no help in deciding where between our case of 80 percent success and our case of 100 percent success to draw the line between equivalence and inequivalence.

If one looks to the definition of strong functional equivalence to solve these issues, one soon encounters difficulties of a different nature. This definition runs as follows: "A machine would be strongly equivalent if and only if it is weakly equivalent in that same respect *and* the processes upon which the behavior of the machine are contingent are of the same type as the processes upon which the behavior of the organism is contingent."[17] To be strongly equivalent thus requires a much broader range of equivalence. But Fodor concedes that the second, more stringent criterion requires that "we have some notion of ways in which psychological processes are related to behaviors."[18] This is tantamount to conceding that this form of functional equivalence can only be defined by referring to psychological theories which can only be understood predictively.

Something seems to be wrong here. Each step of Fodor's argument has carried him further from the clean dichotomy of functional and mechanistic analysis until the argument for functionalism appears to be circular. Four premises would seem to be involved in this circularity: (1) The reason for adopting functional terms is to permit description of psychological states independently of their behavioral consequences. (2) The only way we can describe mental states for which the exact physiological mechanisms are unknown is in terms of functional analysis and functional equivalence. (3) Definitions of strong functional equivalence must rest on theories about how functions are related to behavior. (4) Phase I theories are to be understood as predictions rather than statements of fact.

If we accept the validity of each of these premises, as it appears Fodor does, then either we must conclude that the argument for strong functional equivalence contains a serious circularity, or we are forced to accept one of three most unpleasant conclusions. The first is that the argument permits the functional characterization only of those mental states for which the physiological mechanisms are already specified. The second is that the argument permits the functional characterization only of those mental states which are reducible to behaviors. The third conlcusion is nearly as unpalatable: that the argument dissolves into instrumentalism. That is, if Phase I theories are to be taken purely predictively, and if definitions of strong functional equivalence include tacit statements of Phase I theories, then it would seem that the definition of strong functional equivalence must be understood purely predictively also. Thus the most important term of functionalist theories would be understandable only in instrumentalist terms.

IV. FUNCTIONAL CHARACTERIZATION VS. MECHANISTIC CHARACTERIZATION

One great advantage of Fordor's argument is that it permits discussion of psychological states without insisting on the maintenance of a clear demarcation between psychological reality and the actual physical relationships that obtain in the brain as thinking occurs. There is no doubt that this is a tremendous boon for those who are trying to provide accounts for such abstract issues as how knowledge of conceptual relationships functions in the process of learning. As long as the various mental states being examined are described in functional terms, it matters little whether the various models one hypothesizes to instantiate such states are considered to be merely logical possibilities or replications of the actual physical relationships that obtain in the brain. The point is that the hypothesized models *are* only models; they involve no real claims about the *mechanisms* of behavior, only claims about their usefulness in predicting behavior. The problem is, however, that in practice it is nearly as difficult to separate functions from mechanisms as it is to define functional equivalence.

Consider, for example, some of the various recent attempts to describe the function of a cognitive schema or structure:

1. "The memory structure does more than just influence the stage of processing that determines the set relations among categories during comprehension. (It) facilitates the initial encoding of words and the accessing of their meaning."[19]

2. "The schema accepts information as it becomes available at sensory surfaces and is changed by that information: it directs movements and exploratory activities that make more information available, by which it is further modified."[20]

3. "A High level schema provides slots for selected categories of text information: If information fits a slot, it will be inserted as part of the encoded representation of the text."[21]

4. "Schemata...give generic characterizations of things or events. To interpret a particular situation in terms of a schema is to match the elements in the situation with the generic characterization in the schematic knowledge structure."[22]

It is not readily apparent which of these attempts may be said to provide acceptable functional descriptions of schemata. At least one would seem to be inadequate on the grounds that is so vague that it can not be said to describe a function at all. Description 1 asserts only that memory structure "influences" the determination of set relations and "facilitates" encoding and recall. But to assert that x *influences* y and *facilitates* z is surely not to specify its function. That would be like asserting that the function of a can opener is to facilitate the preparation of dinner.

On the other hand, some of the more specific descriptions seem to give mechanistic rather than purely functional accounts of schemata. In this respect, I feel quite comfortable about accepting the notion of Description 2 that a schema directs movements and exploratory activities, but I feel very dubious about accepting the idea in Description 3 that a schema provides slots for selected categories of text information. I have no doubt that there *is* (logically, that is) such a function as providing slots for selected categories of information, but I entertain severe doubts as to whether such a function is involved in the comprehension of sentences or any other mental activity for that matter. Similarly, before I studied some auto mechanics, I knew that there was such a function as valve lifting, but did not know that such a function was integral to the functioning of my car. So describing the camshaft in functional terms as a valve lifter was not helpful as long as I was unaware that there were valves in my car. My point here is that functional descriptions are often dependent on a detailed knowledge of the hardware. It is not surprising then that most attempts to describe cognitive schemata appear to involve assumptions about the mechanisms of such functions. A good case in point is Description 4, which asserts that the function of a schema is to provide generic characterizations and then adds that this involves a one-to-one matching process. There are many ways to provide generic characterizations besides using a one-to-one matching process. *Which* method is used depends in part on the capability of the hardware. Thus the problem of distinguishing between functional and mechanistic descriptions of mental states appears to be somewhat similar to that of defining functional equivalence: We can not fully appreciate the meaning of function or that of functional equivalence without some understanding of the mechanical processes involved.

What happens in practice, of course, is that psychologists make some assumptions about the mechanisms of cognition when they develop their functional accounts. And the more complete the functional account, the more mechanistic assumptions are made. So very highly sophisticated computer programs modeling human cognition are based on complicated sets of mechanistic assumptions, of which the validity of each is open to question. If, in the midst of all this assumption-making, one fails to attempt to draw distinctions between logical possibility, psychological reality and the actual physical relationships that obtain in the brain, then thinking about cognition can get very sloppy indeed—not to mention farfetched! The uncritical blurring of these distinctions tends to lead the psychologist toward one of the major hazards of the functionalist approach. If he gives in to the temptation to make unwarrented assertions about the nature of the physical relationships which produce the functioning of cognitive structures, he may be led to propose inccreasingly unrealistic explanations of cognitive functions. And the problems involved with determining just when one is justified in claiming or denying functional equivalence tend to prolong the period of acceptance, or at least of non-rejection, of such unrealistic explanations.

I would seem then that Fodor's insistence on distinguishing functional from mechanistic characterizations of cognitive terms does not free us from the burden of distinguishing between psychological and physical relationships. Rather, the difficulties of expressing mental states purely in fuctional terms suggest that we need to be as clear as we can about these distinctions if we are to avoid a slow drift toward total confusion.

V. FUNCTIONALISM AND THE EPISTEMOLOGY OF THEORY BUILDING

At this point in the discussion, two circularities in Fodor's functionalist account of psychology have been suggested. The first circularity involves the dependence of functional descriptions upon Phase I theories in the definition of functional equivalence. It is this circularity which threatens to reduce functionalism to a form of instrumentalism. The second circularity involves the dependence of functional accounts of cognition upon assumptions about the mechanisms of cognition. This circularity appears to leave much of the information processing research on cognition open to the charge of being based on unwarrented assumptions about the nature of the physiological mechanisms involved in cognition. Insofar as information processing models of cognitive structure are based on claims of functional equivalence to human cognition, then this research would seem open to the charges leveled at Fodor's account of functionalism.

Now a supporter of Fodor's functionalism might well try to turn this argument around and argue that these charges avoid a key feature of Fodor's account of theory building in psychology—namely, that Phase I theory building and Phase II theory building *must* go hand in hand. This supporter could argue that it is precisely this interplay of functional and mechanistic theory building which *prevents* functionalism from slipping into instrumentalism and which *provides* effective constraints on the types of cognitive models proposed by information processing research. According to such an argument, each theoretical advance at the functional level would be securely grounded in the information provided by the theory base on the physiological mechanisms of cognition.

This possible counter argument would suggest that the debate over the validity of functionalism should focus on the nature of the back and forth bootstrapping operation relating Phase I theory building to Phase II theory building. But when we look to Fodor for clarification as to how this interplay should occur, we are disappointed. Fodor has provided us with practically no specific description of how functional theorizing about cognition can be expected to produce advances in our knowledge of physiological mechanisms of cognition or vice versa. Indeed, although Fodor cautions us that functional explanations are consistent with a wide variety of hypotheses about the mechanisms responsible for their realization, he offers us no epistemological advice on hypothesis generation. In view of the fact that this issue would appear to be so crucial to Fodor's account, this omission is rather striking. If, in reality, the bootstrapping operation between Level I and Level II theorizing does *not* occur as Fodor envisaged, and if information processing accounts of cognitive structure are *not* sufficiently grounded in theoretical understandings of the physiological mechanisms of cognition, then it would seem that this research is still open to the charges of circularity which this critique has leveled at it.

In view of the severity of these charges, it becomes important to ask how successful information processing approaches to cognitive structure have been in expanding the theory base of research in cognition. According to recent post-empiricist philosophers of science such as Lakatos, the ultimate criterion of the success of a theory is not so much the truth or falsity of any given hypothesis, but whether the research program as a whole is progressing or degenerating.[23] Thus it is reasonable to subject the research in question to the criterion of progressivism.

However, when one attempts to ask whether information processing represents a progressive or a degenerating research program, one sees just how hard it is to interpret this criterion in the case of contemporary psychological research. In terms of sheer volume of research, there is no question that information processing research projects are expanding. In terms of the number of psychological phenomena that are being addressed by this approach, the research is expanding also. What is not so clear, however, is that all this research is expanding the theory base of research on cognition. As one might expect from the preceding discussion, information processing research has produced and not yet rejected a dizzying abundance of competing models for cognitive processes and scores of definitions for terms such as "schema." But it has yet to produce a theory of cognition as coherent as that proposed by Piaget, or even by the behaviorists. Indeed, most of the theory of recent work on cognitive structure is derived from Bartlett's work in the 1930's on schemata in memory. The long sought breakthroughs in our understanding of the physiological mechanisms producing cognition have not occurred, and models of cognition have yet to be meaningfully related to underlying physiological mechanisms.

The failure of information processing to make greater theoretical advances in the face of such a deluge of hypothesis generation is indeed disconcerting. It would seem that what we have here is a research program not in which the hypotheses become *increasingly* ad hoc, but one in which the hypotheses remain *continuously* ad hoc! And there are those such as Neisser who maintain that information processing as it is now conceived is unlikely of ever producing significant theoretical advance. He warns: "If cognitive psychology commits itself too thoroughly to this model (i.e. information processing) there may be trouble ahead. Lacking in ecological validity, indifferent to culture, even missing some of the features of perception and memory as they occur in ordinary life, such a psychology would become a narrow and uninteresting field."[24]

VI. CONCLUSION

At present, I don't think that the answer to the question asked by the title of this paper is obvious. Does the information processing approach to cognitive structure represent the new face of educational research or is it already a degenerating research program? I suspect that the best answer is: "Both." The weaknesses of information processing as a vehicle for studying cognition are becoming increasingly apparent. It rests on an inadequate epistemological base. Two serious circularities in the functionalist account have been suggested in this paper. The first threatens functionalism with the charge of reducing to instrumentalism. The second leaves functionalism open to the charge of encouraging unwarranted presumptions about the mechanisms of cognition. Furthermore, it is not at all clear that information-processing research on cognitive structure can meet the criterion of progressivism. Although this research is producing a deluge of competing hypotheses, it is failing to make major advances in our theoretical understanding of cognition. Furthermore, it diverts attention from investigation of two major influences on cognition: the informational sources and constraints provided by the world at large, and the effects of social interaction.

As such limitations are increasingly felt by psychologists, they are beginning to turn to alternative research orientations. More and more psychologists are going into the field to study the operation of cognition in real world situations and in socially rich environments. The recent upsurge of interest in ethnographic research and the related fascination with phenomenological accounts of cognition are symptomatic of this trend. An alternative research rationale would seem to be forming.

For all these reasons, I concluded that the forward momentum of information-processing research on cognition is being lost. But given the forces of intellectual inertia which constrain the educational research establishment, it will probably remain the dominant mode of educational research for at least another ten years.[25]

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1. Ulric Neisser, *Cognition and Reality: Principles and Implications of Cognitive Psychology* (San Francisco: Freeman, 1976), pp. 6-7.

2. For example, rather than considering memory merely as the end product of a series of attained or unattained association linkages, the phenomenon could now be conceptualized as a process involving the interaction of several components, to wit: input, selection, encoding, short-term storage, long-term storage, retrieval and decoding.

3. Ulric Neisser, *Cognitive Psychology* (Englewood Cliffs, New Jersey: Prentice-Hall, 1967), p. 8.

4. Jerry A. Fodor, *Psychological Explanation: An Introduction to the Philosophy of Psychology* (New York: Random House, 1968).

5. Jerry A Fodor, "Functional Explanations in Psychology," in *Readings in the Philosophy of the Social Sciences*, ed. May Brodbeck (New York: Macmillan, 1968), pp. 223-38.

6. This very straightforward way of expressing the distinction was provided by May Broadbeck. See Brodbeck, *Readings in the Philosophy of the Social Sciences*, p. 142. Unfortunately, this description may just be a little *too* straightforward to do justice to the distinction. A better way of expressing the distinction might be as follows: the functional account describes a phenomenon in terms of its end result; the mechanistic account describes the events that occur to produce that result.

7. Fodor, "Functional Explanations in Psychology," p. 231-32.

8. In addition, some care must be taken to avoid confounding the terms "observables," "behaviors," and "mechanisms." By "behavior" is usually meant observable or overt behavior which is described wholly in nonphysiological terms. Thus "behavior" is usually associated with *meaningful* behavior or *actions*, rather than with physiological *movements*. To be sure, some slippage often occurs in using these terms in psychological descriptions. For example, psychologists often refer to "blushing" or "growing agitated" or "perspiring profusely" as if these phrases described behaviors. In so far as possible, however, Fodor seems to mean to keep the distinction between behavior and movement. He also wishes to maintain a clear distinction between these terms and the term, "mechanism." "Mechanism" implies causation, whereas none of the other terms, including "function", implies causation.

9. But, as May Brodbeck points out, two things are necessary for such a reduction. "First we msut know the neurophysical laws of the organic processes. Because these laws do not mention behavior or psychological states, from them alone we could neither predict nor explain behavior. Therefore, second, we must also know the empirical laws connecting each psychological state at a given time with its corresponding physiological event at the same time. If we knew *both* these things, then the laws of psychological theory would be derivable from those of neurophysiology in conjunction with the laws connecting psychological states to behavior. If this were accomplished, then each psychological concept could at some time and for some purposes be dispensed with." See Brodbeck, *Readings in the Philosophy of the Social Sciences*, p. 142.

10. Fodor, *Psychological Explanation*, p. xvii.

11. Ibid., p. xvii.

12. Ibid., p. xix.

13. Ibid., pp. xix-xx.

14. Ibid., p. xx.

15. Ibid., p. 109.

16. Ibid., p. 138.

17. Ibid., p. 142.

18. Ibid., p. 142.

19. David E. Meyer and Roger W. Schvaneveldt, "Meaning, Memory Structure and Mental Processes," in *The Structure of Human Memory*, ed. Charles N. Cofer (San Francisco: Freeman, 1975), p. 72.

20. Neisser, *Cognition and Reality*, p. 54.

21. Richard C. Anderson, Rand J. Spiro and Mark C. Anderson, "Schemata as Scaffolding for the Representation of Information in Connected Discourse," *American Educational Research Journal* 15 (summer, 1978), p. 438.

22. Ibid., p. 434.

23. Imre Lakatos, "Falsification and the Methodology of Scientific Research Programmes," in *Criticism and the Growth of Knowledge*, ed. Imre Lakatos and Alan Musgrave (Cambridge: Camgridge University Press, 1970), pp. 91-196.

24. Neisser, *Cognition and Reality*, p. 7.

25. I should like to thank Richard Boyd, Denis Phillips and Kenneth Strike for their critical comments on an earlier draft of this paper.

RESPONSE TO DE JONGHE

Martin Levit
University of Missouri–Kansas City

Lynn De Jonghe's paper is, I think, a careful and substantial critique of Jerry Fodor's views on psychological explanation. Fodor developed his functionalist approach and his concern with functional equivalence within the context of computer-based information processing studies of cognition. He stated his belief that, with some qualification, "understanding the operations of a computer capable of simulating a given form of behavior is tantamount to understanding the behavior itself."[1] As De Jonghe indicates, Fodor's philosophical defense of simulation as explanation is the most elaborate one in existence.

There is nothing in De Jonghe's cogent analysis that I want to question. Indeed, I'll try to support her argument a bit by connecting some key issues in the Fodor–De Jonghe disputation to some general topics in philosophy of science. If, as I proceed, I misrepresent De Jonghe's argument or suggest unacceptable interpretations of Fodor-like weaknesses, I'm sure that De Jonghe will present corrections or objections.

Fodor tries to establish a basic and, for his view, significant dichotomy between functional explanations, which state what something accomplishes, and mechanistic explanations, which set forth empirically necessary conditions for an effect. Fodor argues that one reason why functional accounts cannot be translated into mechanistic accounts is that things may enter into multiple causal chains and contribute to multiple effects. This is a strange argument, for this general truth does not prohibit but, rather, invites hypothesizing about the inevitable multiple relations of things and events. Scientific knowledge is relational knowledge. Objects of science are known not by restricting but by expanding and comparing networks of possible relations and interactions.

Fodor also argues against the conversion of functional into mechanistic explanations by observing that some consequences of states and processes being studied may have nothing to do with the particular effect that the researcher wants to identify with the function of the structure or process being studied.[2] Again, this is a strange argument. It substitutes a contingent, individual psychological condition (the researcher's purpose or anticipation) for logical, methodological and evidential principles in a public and historical process.

A scientifically acceptable functional explanation is a kind of pattern explanation in which an event or entity is explained by reference to its place in a sequence or system. It is often viewed as a telescoped mechanistic explanation. There seems to be no good reason why teleological claims cannot be reformulated, often with increase in verifiable content, into mechanistic claims about necessary, conditionally necessary, alternative, partial and other causes. De Jonghe provides some good illustrations of the difficulty encountered in bifurcating functional and mechanistic claims, including the difficulty of knowing functions without knowing mechanisms.

Vitalists in biology have always been able to hang on to their entelechy, the mysterious force that allegedly directs life processes, because there always has been some scientific ignorance about life processes. Though he is far from being a vitalist, Fodor also opts for a teleological or functional explanation—in his case, of psychological states and structures—claiming that ignorance of causal mechanisms necessitates this move in the early stages of psychological investigations. What is crucial here is that, like the entelechy of vitalism, Fodor's theoretical terms are known only by observations of assumed end results. This reduction of theoretical to observational terms leads to the debilitating circularities De Jonghe reveals in Fodor's argument.

At this point—in Fodor's simple, direct and exclusive tie between a theoretical term and the observations which it helps predict and which exhaust its meaning—we are in contact also with De Jonghe's criticism that Fodor's views provide inadequate criteria for selecting acceptable explanations of psychological processes from the indefinitely large set of computer mechanisms that might be taken to simulate these processes. I think De Jonghe's judgment is quite correct.

In good part, this debilitating flaw in Fodor's proposal arises, I believe, from the overload he puts on successful prediction as the criterion of acceptance. Characteristically, inquiries which rely heavily on predictive ability in accepting hypotheses take on a technological rather than a scientific orientation. The search is for efficiency in achieving anticipated effects. Contingent empirical regularities become promoted, misleadingly, into scientific laws or principles. Irregularities or deviations from expectations are passed over as if accidents, changes, irregularities and so on were freaks of nature rather than lawful events. Shallow and ad hoc explanations abound. A few confirmed predictions tend to lead to the fallacy of affirming the consequent, and then the so-called more "theoretical" part of the belief, usually a fairly simple antecedent clause is accepted as confirmed. There is little or no concern for the development of a general methodology for deepening and improving theoretical work.

Fodor's views seem to encourage this technological orientation. Neglected are almost all of the most important (and highly interrelated) criteria for judging scientific theories as acceptable and promising. He does not deal with problems concerning how and why a young science might move toward achieving theory interconnectivity and external consistency. For example, he does not begin to indicate the criteria that might be involved if psychologists sought to develop coherent theoretical and working relations with sociologists, anthropologists, physiologists and other experts. He does not deal with the significance of developing alternative theories. Nor does he deal with the meaning of simplicity in connection with the crowd of ad hoc theories in psychology. Fodor does not probe the import of getting comprehensive, cumulative and converging evidence from a variety of sources, context, procedures and instruments. In all, he fails to indicate how these and other procedures and criteria might promote depth and fertility in theories and might develop rich networks of interconceptual, contextual or intensional meanings of theoretical terms. Such meanings could not be exhausted by reference to observations in this or that situation. Such meanings could serve as focal points for evidence collection from a variety of situations and focal points for the deduction of novel possibilities in a variety of situations.

To be sure, problems involved in improving social theories are not going to be solved in a century or two. But just as surely we will not diminish theoretical weaknesses by developing philosophical support for an information processing research program that, as De Jonghe indicates, is characterized by many kinds of fragmented studies within confining and trivializing contexts. Fodor's argument may be useful for increasing a certain technical efficiency and dedication to a particular instrument. But a philosophy of technology is not a philosophy of science. We are, I think, indebted to De Jonghe for showing this in connectioned with Fodor's arguments.

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1. Jerry A. Fodor, *Psychological Explanation: An Introduction to the Philosophy of Psychology* (New York: Random House, 1968), p. 121.
2. Ibid., p. xvii.

NEUTRALITY AND THE STRUCTURE OF EDUCATIONAL INSTITUTIONS

Michael A. Oliker
School of Library and Information Science,
Drexel University

I.

In the late 1950s, Robert H. Ennis demonstrated that many of the philosophers of education of the 1930s and 1940s, such as John Dewey, Boyd Bode, B. Othanel Smith, and William O. Stanley II, and educational theorists such as J. Harlan Shores and Harold C. Hand, had taken the position that it is impossible for the schools to be neutral.[1] In the clear, readable style that we have come to expect from Professor Ennis, he described several counterexamples to the claim that "neutrality is impossible" and concluded that "the claim that neutrality is impossible was found to be either useless or false."[2] Despite a good deal of discussion of this issue during the 1960s and early 1970s, Kenneth Strike recently complained that "the exponents of various views about neutrality have been to a large extent talking past each other."[3] He distinguishes between arguments about the *desirability* of neutrality and arguments about the *possibility* or neutrality[4] and I shall adopt this distinction: this paper will be primarily concerned with the possibility of neutrality (although there will be remarks here and there about its desirability). The intent of my argument will be to show *why* Dewey, on the one hand, and Ennis and James E. McClellan,[5] on the other, are talking past each other. First, I shall argue that while Ennis and McClellan are concerned with the logical and empirical possibility of neutrality of *individuals,* Dewey is making claims about the impossibility of neutrality of *institutions.* Having done this, I shall be able to show that the views of Dewey, Ennis, and McClellan are complementary and that each helps to illuminate aspects of the problem. I shall conclude with some observations about how an examination of the problem of neutrality can help philosophers of education understand why the teachers and future teachers who take their courses are not interested in philosophy of education.

II.

In the May, 1937, issue of *The Social Frontier,* John Dewey asserted that "the idea that the schools can be completely neutral...sets up an end incapable of accomplishment."[6] Professor Ennis repeats this quotation–minus the first two words–at the beginning of his defense of the possibility of neutrality. The old cliché of saying that someone "can't see the forest for the trees" seems useful in describing the conflict between Dewey and Ennis. I might describe Dewey as being able to see the forest but not the trees while Ennis is able to see the trees but not the forest. Dewey sees what Ennis does not see, Ennis sees what Dewey does not see, and neither sees what the other sees. Specifically, when Dewey says that the schools cannot be neutral, he is right; and when Ennis says that a civics teacher can be neutral in a school election, he is right too. Ennis's paper is simply not a refutation of Dewey; nor can Dewey's arguments be properly utilized in a refutation of Ennis.

According to Ennis, "the general form of the arguments" used by Dewey, Bode, the Committee on Religion and Education, Smith, Stanley, Shores, and Hand, is "'Neutrality is impossible. Therefore, the schools had better be sure that the stand they are taking is the right one.'" He adds that "This argument, together with an argument for some stand, results in the conclusion that the *schools* should take that stand." It seems that Ennis takes the following three claims as synonymous:

(1) Neutrality is impossible
(2) Neutrality for the schools is impossible
(3) Neutrality for Mrs. Gamma is impossible

and that the phrase "regardless of the subject's intent" can be added to each sentence without changing the meaning. Ennis argues that the subject of each of the three sentences is an entity that can form intentions. So, Ennis can demonstrate the falsity of (1) simply by describing an entity that forms the intention to be neutral and succeeds at *being* neutral. This is not hard. But Ennis thinks that by showing that (1) and (3) are false–which he has done–he has also shown that (2) is false.

James E. McClellan has argued that (2) is true:

> ...*the schools* cannot be politically neutral toward the policy of political neutrality in education, any more than *the schools* can be neutral toward the policy of taking a stand for or against any particular side of any particular issue which may impinge upon them. In this statement, the expression "the schools" means what I take Ennis to mean by it, *viz.,* those involved in and responsible for educational policy decisions.[7]

So, there is another translation to add to our list.

(2a) Neutrality for those involved in and responsible for educational policy decisions is impossible.

Is this statement true? Is it synonymous with (2)? No, on both counts. Imagine a meeting of the board of trustees of a large university. The College of Engineering at that university has recently gotten involved in some large-scale projects in cooperation with the S Corporation. Ms. S, the president of the corporation, is a member of the board. The Chair of the board announces that the board will have to consider this relationship: they have the option to take a stand for it, take a stand against it, or remain neutral. Ms. S declares that she is in a position that involves a conflict of interest and must remain neutral about the board's decision. She then leaves the room while the vote is taken. And McClellan's translation of Ennis is proven false: Ms. S has established, at least *prima facie*, her neutrality (in the tradition of Supreme Court Justices) by withdrawing from the case. Further, (2) and (2a) are not synonymous. The Chair of the board might also quite sensibly say to the other members, "In order for our school to maintain its neutrality, we policymakers will have to take a firm stand against the involvement of the College of Engineering and the S Corporation." Or, on the other hand, "In order to insure that our school will continue to help the S Corporation, our best course of action is to remain neutral." What McClellan *has* shown is Ennis's basis for his assumption that the subject of (2) is an entity that can form intentions: namely that claims about "the schools" are reducible to claims about individuals. All three of Ennis's versions of the neutrality claim depend on this assumption.

So far, I have been attempting to argue that both Ennis and McClellan accept the individualistic assumption that claims about "the schools" are reducible to claims about individuals, and that evidence about individuals does *not* necessarily enable us to determine conclusively whether such claims are true or false. I shall now turn to a few brief remarks about Dewey's paper.

The whole point of "Education and Social Change" is to sketch a very general view of how education as a social institution is influenced by social forces and what "the schools," or "the educational system," or "education"—Dewey uses these terms as if they were synonymous—can do in response to social forces. Dewey acknowledges that "schools *do* follow and reflect the social 'order' that exists."[8] His primary concern is to argue that the schools should not be passive in the face of social forces. Dewey goes on to emphasize that he is not talking about political parties, "I am talking about social forces and their movement."[9] His point about neutrality is *historical:* neutrality is "utopian" because it will result in "perpetuation of disorder and increase of blind because unintelligent conflict."[10] An attempt to refute Dewey's position would have to involve historical evidence that an educational system *has* been able to maintain a policy of neutrality without the unintended consequences of the perpetuation of disorder and blind conflict.

III.

While my theme in the previous section is critical of Ennis and McClellan and sympathetic to Dewey, I do not wish to be understood as attacking Ennis and McClellan and defending Dewey. It *is* a limitation of Dewey's position that it cannot account for the examples that Ennis describes or the careful arguments about the nature of educational policy that McClellan constructs. A comprehensive understanding of the problem of neutrality must enable us to see the connections among what is right in the work of Dewey, Ennis, McClellan, and others.

Previous discussions of neutrality and the schools have emphasized neutrality, but there has been little discussion of "the schools." So, I must ask, what is a school? Well, a school is an institution. Given the assumptions that institutions exist, that they have identifiable characteristics, that institutions affect and are affected by individuals, and that a school is a kind of institution, I am now in a position to ask how the characteristics of an institution can be identified. In order to make it possible to identify the characteristics of an institution, I need some sort of heuristic device. This device need not state necessary and sufficient conditions; it must simply be useful for heuristic purposes. John Rawls's definition of "institution" seems to me to be useful for my purposes. According to Rawls, an institution is

> a public system of rules which defines offices and positions with their rights and duties, powers and immunities, and the like. These rules specify certain forms of action as permissible, others as forbidden; and they provide for certain penalties and defenses, and so on, when violations occur.[11]

I will treat this definition as metaphorical, not a literal description.[12] An institution might take the form of a classic military bureaucracy in which virtually every action that its incumbents might perform is accounted for by some regulation or, at the other end of the continuum, an institution's rules might be so vague that its incumbents have little more than an impression of what the responsibilities of their positions are.

This "system of rules" is what is meant by the phrase "the structure of educational institutions" in the title of this paper. There are two ways of talking about an institution—first, "as a possible form of conduct expressed by a system of rules; and second, as the realization in the thought and conduct of certain persons at a certain time and place of the actions specified by these rules."[13] The first notion might be called a *proposed* institution: a system of rules that has been suggested as a possible basis for an institution but has not been realized. The second notion might be termed a *realized* institution. Its rules might not be formally stated or tacked on a wall for all to see. It need not even be assumed that *anyone* who is a participant in the institution can state all of the rules explicitly. But since the rules must be *public*, it must be *possible* that the rules be describable. It might take an unusually perceptive sociologist of organizations to do this, however.

John R. Searle's well-known distinction between *regulative* and *constitutive* rules is also useful for understanding the nature of an institution. According to Searle,

> regulative rules regulate antecedently or independently existing forms of behavior; for example, many rules of etiquette regulate inter-personal relationships which exist independently of the rules. But constitutive rules do not merely regulate, they create or define new forms of behavior. The rules of football or chess, for example, do not merely regulate playing football or chess, but as it were they create the very possibility of playing such games. The activities of playing football or chess are constituted by acting in accordance with (at least a large subset of) the appropriate rules.[14]

The constitutive rules of educational institutions define the powers and duties of the various offices within it (e.g.: principal, teacher, janitor, etc.). They will also define what the main activities are of the institution (e.g.: teaching, training, indoctrinating, social selection, social control, etc.). There may be differences in the constitutive rules of elementary schools and universities, but all educational institutions must have some sort of "family resemblances" *IF if is true that educational institutions are distinguishable from other kinds of institutions.*[15] Searle describes constitutive rules as typically taking the form "X counts as Y" or "X counts as Y in context C." For a rule to actually *be* constitutive of a realized institution, the incumbents of that institution must not merely *say* that "X counts as Y," they must actually *count* X as Y. *Any person who counts X (e.g.: students with IQ scores under 80) as Y (e.g.: not college material) has tacitly accepted the value judgment that X should be counted as Y.* Or, to put it another way, a person who accepts an office in an institution that has a constitutive rule such that an incumbent of that office is obligated to count X as Y and carries out that obligation—counts X as Y—tacitly accepts the value judgment that X should be counted as Y. That person might say "It was the only job I could get" or "I needed the money to feed my starving children" or "I don't think X should be counted as Y, but I'll get fired if I don't count X as Y" and thereby morally excuse her actions; but this does not change the fact that she has counted X as Y.[16] (A borderline case would be the person who objects that she didn't realize that she was counting X as Y; she thought she was counting P as Q. This seems to me to be a model case of what the Marxists call "false consciousness.")

Let me conclude this section by taking another look at the literature on neutrality from the perspective on educational institutions that I have described.

Dewey is offering a historical and institutional view of schools. I might argue in defense of Dewey that he is trying to show that the constitutive rules of educational institutions have their historical origins in the educational ideologies of individuals who have established realized institutions that embody value judgments that take the form "X should be counted as Y." A school, therefore, cannot be neutral because its constitutive rules are value-laden in that individual incumbents of that institution must accept the tacit value judgments implicit in the constitutive rules for the rules to actually *be* constitutive of a realized institution. I do not wish to be understood as making an empirical claim to the effect that an individual who accepts an office in an institution in 1979 is agreeing to act on the basis of the *same* constitutive rules that were the basis for the founding of the institution in 1879. Constitutive rules change when people change them, and it seems to me that Dewey was reminding office-holders in educational institutions that the characteristics of their institutions can be changed consciously by the people in them. They need not sit by passively and wait for more powerful institutions to make changes. While Dewey's emphasis is institutional, there is certainly a place for the actions of individuals in institutions to result in change in those institutions. There is, of course, the serious problem of what changes educators will be *permitted* to make in educational institutions by the various vested interests in society; it may very well be that educators who do attempt to change the characteristics of their institutions are typically met with such overwhelming opposition that they soon give up trying.

Ennis deals almost exclusively with the characteristics of individuals who occupy offices in an educational institution. I have no quarrel with the distinction between public and private neutrality or the argument that the intention to be neutral is a necessary condition for Mrs. Gamma to be neutral in a school election. But let us take another look at his example of the basketball referee. Certainly a basketball referee can be publicly neutral in the application of the rules of basketball. It is *not* the case, however, that the *rules of basketball* are neutral. The rules of basketball give a clear advantage to tall individuals with large hands. And there are analogous situations in education. The office of teacher typically obligates its incumbents to turn in grades at the end of a term: a teacher who finds that she has developed an intense hatred for one of her students does not have the option to be neutral when the time comes to turn in grades.

McClellan bases his arguments on the same individualistic assumptions that support Ennis's positions. And he makes some valuable improvements on Ennis: that an individual intends to be neutral (or to take a stand) is surely not sufficient for the truth of the claim that the individual *is* neutral (or *does* take a stand); neither is the absence of intention to take a stand sufficient for the truth of the claim that an individual was neutral. He is also correct in arguing that a policy of neutrality is not a neutral policy: there is certainly something self-contradictory in the notion of a "neutral policy."[17] But McClellan is just wrong when he says, "At the policy level, however, it is not logically possible to be politically neutral."[18] His individualistic assumptions do not allow for making the distinction between the characteristics of an office in an institution and the characteristics of the individual who occupies that office. Although the office of policymaker *does* obligate its incumbent to make policy, that office does typically allow—and in some circumstances *obligate*—its incumbent to be neutral in the case of a conflict of interest. After Richard M. Nixon's incessant attempts to equate his own good with the good of the office of President of the United States, every American should be familiar with *that* distinction!

IV.

So, *is* it impossible for the schools to be neutral? I can only answer that question with more questions. Is a neutral institution a myth like the Flying Dutchman or an oxymoron like a married bachelor? If, as Ennis has argued, the intention to be neutral is a necessary condition for neutrality, then should we ask first whether an institution can form the intention to be neutral? If Charles Taylor is right when he holds that "we need a background of value-commitment to give neutrality a clear application,"[19] and Strike is right (*if* he is) when he claims that that the university is "the referee of the battle o of ideas"[20] then what in that metaphor is it that the university enforces that is analogous to the rules of basketball that a basketball referee enforces? Remember: we are talking about THE UNIVERSITY not "the scientific community."

And is neutrality *desirable*? Again, let me answer with a question: has the *belief* in the desirability of neutrality blinded college professors to weaknesses and biases in the standards that they apply and justify "impartially?" Perhaps we might begin by asking their students!

Finally, I need not remind anyone who has ever attempted to teach philosophy of eduucation of the antagonism of so many teachers to our subject. Several years ago the sociologist of eduction Robert Dreeben offered evidence that many teachers prefer that administrators make policy decisions for them.[21] Perhaps teachers regard the issues of philosophy of education as issues to which they should properly remain neutral.[22]

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1. Robert H. Ennis, "The 'Impossibility' of Neutrality," *Harvard Educational Review* 29 (Spring, 1959): 128-136. Reprinted as "Is It Impossible for the Schools to be Neutral?" in *Language and Concepts in Education*, ed. B. O. Smith and R. H. Ennis (Chicago: Rand McNally, 1961), pp. 102-111.

2. Ennis, "Is It," p. 109

3. Kenneth Strike, "The Logic of Neutrality Discussions: Can a University be Neutral?" *Studies in Philosophy and Education* 8 (Summer, 1973): p. 62.

4. Ibid., p. 64.

5. James E. McClellan, "The Politicizing of Educational Theory: A Re-evaluation," *Philosophy of Education 1968* (Edwardsville, Ill.: Philosophy of Education Society, 1968), pp. 94-105.

6. John Dewey, "Education and Social Change," *The Social Frontier* 3 (May, 1937): 235-238.

7. McClellan, p. 103.

8. Dewey, p. 235.

9. Ibid., p. 236.

10. Ibid., p. 237.

11. John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971), p. 55.

12. This definition will serve as my "root metaphor." See Stephen C. Pepper, *World Hypotheses* (Berkeley: University of California Press, 1970.).

13. Rawls, p. 55.

14. John R. Searle, *Speech Acts* (London: Cambridge University Press, 1970), pp. 33-34.

15. Cf. Henry C. Johnson, Jr., "Are Our Universities Schools?" *Harvard Educational Review* 35 (Spring, 1965): 147-168.

16. Michael A. Oliker, "Douglas McGregor's Theory Y and the Structure of Educational Institutions," Ph.D. dissertation, University of Illinois at Urbana-Champaign, 1976, pp. 1-18.

17. Although this so-called "self-contradictory" notion might be perfectly intelligible if understood as an oxymoron. See Walter P. Krolikowski, "La Force de Marie Brizard: Analysis on the Rocks," *Philosophy of Education 1974* (Edwardsville, Ill.: Philosophy of Education Society, 1974): 115-126.

18. McClellan, p. 103.

19. Charles Taylor, "Neutrality in the University," in *Neutrality and Impartiality*, ed. Alan Montefiore (London: Cambridge University Press, 1975), p. 128.

20. Strike, p. 79.

21. Robert Dreeben, *The Nature of Teaching* (Glenview, ill.: Scott, Foresman, and Co., 1970), p. 72.

22. I am grateful to Jon Fennell, Peter Goldstone, Robert Halstead, Robert Holtzman, Ralph Page, Edward Rozycki, Alan Soffin, and John Wirebach for their comments, and to Patricia Banmiller and Bill Jankovsky for their interest.

RESPONSE TO OLIKER

James Palermo
Buffalo State College

Is it impossible for the schools to be neutral? If I understand Dr. Oliker's scholarly analysis of the literature, his answer is a highly qualified "it depends upon what you mean by the terms 'neutrality' and 'schools.'" He pays special attention to the Dewey, Ennis and McClellan positions and finds that each taken separately is insufficient at either the empirical or logical levels of analysis. He concludes that each philosopher is talking past the other, that each is both right and wrong, and that a synthesis of what is right in each position is demanded to analyze the neutrality issue.

According to Oliker, the problem and its resolution concerns *individualistic* versus *holistic* methodologies. Ennis and McClellan are taken to represent the *individualistic* position, i.e., both are seen treating claims meant either to defend or refute the neutrality/non-neutrality of *individuals* in the same way as claims about *institutions.* This approach does not allow us to determine whether such claims are true or false.

On the other hand, Dewey's *holistic* analysis illuminates the direction of *institutions* but it does not account for actions of the single *individual,* exemplified in the Ennis and McClellan arguments.

Searching for a more rigorous way of dealing with the issue, Oliker selects certain elements from both the *individualistic* and *holistic* positions and then integrates them into a new conceptual scheme.

Because his paper is framed by the techniques of ordinary language analysis, I shall first describe the basic constraints of that method and then critique his specific arguments. The basic methodological assumption is that the techniques of lingusitic analysis can uncover the logic and grammar of what is said and what can be communicated. The salient concern is with human beings as concept users; i.e., humans as entities that can form and express intentions. The various institutions and social settings or "forms of life" are expressions of the uses of language or "language games" and one gets hold of the use of concepts in a particular "language game" by searching for the rule which governs that communicative activity. The rule is a public and conventional linguistic meaning which is exhibited in use. More than that, human action objectifies intentions or rule governed behavior. Indeed, intentions evidence the purposes or reasons for action. To summarize the point, human actions are intentional because they show purposes derived from rules which are public conventions. In short, if I want my intentions to be understood, I do not arbitrarily decide whether or not to apply a linguistic rule; I obey one. Hence, the normative thrust of linguistic analysis concerns the evaluation of intentions in terms of the grammar and logic of ordinary statements and Oliker, working as an analytical philosopher must take his methodological standard from the everyday world. What is problematic in the method is that no boundary separates human intentions from social conventions.[1] This conflation of intention and social conventions works to legitimate the "given." Placing human action under the rubric of the logical and grammatical structure of intentions stops philosophical analysis on the side of description. It ignores the coercive power and political sanction which those conventions embody. Hidden behind these sanctions are the legitimations of a social class system. The analyst's methodological conflation of human intentions and social convention is a critical shortcoming because it blurs the most significant sense in which the neutrality issue can be explicated. The conclusion to the above is that the analytic method *in itself* is incapable of producing a political critique.

The paper's a-critical convergence of intentions and social conventions is particularized in the use of Searle's distinction between the *regulative* and *constitutive* rules which govern institutions. Regulative rules regulate *"antecedently or independently existing forms of behavior... inter-personal relationships which exist independently of the rules."* By contrast, *constitutive* rules "do not merely regulate, they create or define new forms of behavior." To utilize Searle's notion of regulative rules in a critical sense, one must begin with the most politically significant interpersonal relationship between humans. That relationship is *labor.* In our society the *everyday meaning* of that relationship is based upon the capitalist ideology of equivalence exchange between the living human labor power and wages. *Intentions, then, are not neutral but are first mediated by the regulative rules of the political economy.* Searle himself trivilializes the *political significance* or regulative rules by placing them in the order of rules of etiquette.

Oliker, concerned about the working of institutions, seizes upon *constitutive* rules; he seems convinced they suffice to describe the duties, powers, activities and offices within schools. But, the political meaning of *constitutive* rules is obscured unless they are connected to the overarching socio-economic structure which regulates institutions; i.e., the *regulative* rules of corporate capitalism. The treatment of *constitutive* rules separate from the antecedent and determining *regulative* rules not only falsifies the political mediation of human intentions, it forces Oliker into an attempt to reconcile the dualism between *holistic* and *individualistic* accounts of human intention.

Insofar as it goes, I am in substantial agreement with McClellan's argument. Therefore, I shall particularize my critique by turning first to Oliker's attempt to rebut him. The author faults McClellan because the latter makes no distinction between a policy-making office and the individual holding that office. Oliker's counterexample is of Ms. S., a university trustee and corporation president. The example is meant to show that in the face of conflicting interests, both Ms. S. and the university itself can behave in a politically neutral way. Beyond the *prima-facie* evidence of Ms. S's withdrawal one must ask if *her action and its effects* were politically neutral. The answer is NO. Indeed, the example of the S company's involvement with the university shows a political channeling of instruction and research into the economic process. It allows that knowledge produced by the university is integrated into the administrative strategies of private enterprise. This is not news; one need only consult the work of Habermas, Marcuse and Wellmer. I make the point simply to establish the context within which the "S" example must be evaluated. Again, that context is labor; the individual is fundamentally related to others in the social form of production. If one accepts this at the outset, the *individualistic/holistic* dichotomy is not very helpful. Instead, the issue of political neutrality concerns the dialectical relationship between the institution and *the individual acting in his capacity as an agent of the institution.* The issue then is not confined to *constitutive* rules but human intentions and action which are set against the larger ideological context of political and/or moral *regulative* rules. The "My-lai" massacre is a case in point.

With these distinctions in mind, in order to prove "S's" neutrality, Oliker must show that both she and the university did not act according to the *regulative* rules of corporate capitalism and that their "neutral" actions had no political effects.

Instead, it can be argued that "Ms. S" withdrew because she confronted a conflict between, opposing *constituent* rules. This opposition was elemental because it involved role definitions which appeared as mutually exclusive. If we assume she acts "openly," then Ms. S's choice was the most logically politic way of resolving the conflict. Indeed her action is significant as it exemplifies not simply the knowledge and skills which the university provides; beyond that, it demonstrates those extra-functional attitudes necessary for professional success which are intertwined with a university education itself. On the other hand, if she were to demand her right to vote, her action could be construed as a betrayal of the spirit of the *constituent* rules of the board of trustees. In any event, her actions have political consequences.

The university's actions are likewise not neutral. If university trustees take a stand against involvement with the "S" corporation and call that "neutrality," they are then able to define *any* policy with the economic sector as nonpolitical. This I believe is a contradiction in terms. Thus, the university's claim to neutrality in the face of established cooperation with the "S" corporation, acknowledges and perpetuates the non-neutral policy of collaboration.

Turning to the Ennis argument, one finds that he has *in principle* proved that the schools can act neutrally. But Oliker gives the argument too much credit. In fact, the example of the civics teacher who acts neutrally in a class election can itself be construed as a *non-discriminatory* case, unless placed within a political context. An identical scenario when performed by a teacher in a racially segregated school suffices to show that that teacher's actions are not neutral. The Supreme Court's decision in the *The Board of Education vs. Brown* recognizes this fact.

With respect to Dewey, all one can say is that his *admonition* has not been disproved. In fact, I believe one can argue as I have in support of Dewey. Before one faults Dewey, one needs to review the direction of his entire corpus; a single phrase taken out of context will not suffice.

To the question "is the neutral school a myth like the married bachelor?" The answer in its most politically significant sense is Yes. One need only ask victims of the myth.

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1. I have drawn this theme from Maurice Roche, *Phenomenology, Language and the Social Sciences* (Boston: Routledge and Kegan Paul, 1973), pp. 63, 65.

FIVE IDEOLOGIES OF CULTURAL DIVERSITY AND THEIR CURRICULAR RAMIFICATIONS

Richard Pratte
The Ohio State University

I. INTRODUCTION

I wish to argue in this paper that, to put it in very general and rather imprecise terms for the moment, there is a close and significant relationship between a particular ideology of cultural diversity and certain curricular proposals. It will be suggested that this relationship encompasses a wide range of feelings, attitudes, and judgments fundamental to the notion of the Good Society. Hence, a substantial portion of the paper will be given over to characterizing five ideologies of cultural diversity in order to better understand the thrust of various educational programs and their curricular import.

For simplicity's sake, it is assumed that cultural diversity may be symbolized by *A, B, C, D,* with each letter standing for a cultural group, be it religious, racial, national, etc.[1] Hence, cultural diversity provides the "difference" criterion by which groups are demarcated in society; and we do not need to know what the differences are, preferring one to another. The second condition necessary for an ideology of cultural diversity is that there be a prescription as to the proper goal or outcome of cultural diversity that maximizes the Good Society. Thus briefly, cultural diversity (*A, B, C, D*) serves as a necessary condition for cultural ideology, but it is not sufficient, for there must also be a prescription regarding what should be made possible in terms of realizing the best kind of society.

Five ideologies of cultural diversity are presented in Appendix A.

II. FIVE IDEOLOGIES

Assimilation: Ideology of Anglo-Conformism

The ideology of assimilation may be expressed in the formula $A + B + C + D = A$, where *A, B, C, D* represent different social groups and *A* represents the dominant or core group. The latter, historically in the United States, has been the case of "Anglo-conformity." This position has held that, over time, all groups (those allowed to) will conform to the life style, values, and mores of the dominant majority.

The ideology of assimilation arose in the late nineteenth century largely in response to severe structural changes in the United States. The immigration of many millions, mainly the "new" immigrants from Eastern and Southern Europe, seemed to justify the elimination of differences in favor of the culture of the dominant group. Only members of the Anglo-Saxon (so-called Aryan or Nordic races) were deemed capable of producing a superior culture and the chief strategy chosen to keep America vital (pure) was to demand that others become as much like the superior groups as possible, all the while excluding "inferior" groups such as blacks, Orientals and so on.

In this respect, two important corollaries were involved. First, it was believed that the culture of the dominant majority or Anglo-Saxons was in some *prima facie* sense superior. Second, perhaps conversely, the values and life styles of immigrant groups were judged inferior due to alleged dishonesty, uncleanliness, subversive political beliefs including a presumed allegiance of Catholics to the Pope, and so on.

This way of thinking had profound effects. In order to promote Anglo-conformism it was necessary to discredit the other groups, especially the immigrants. A key strategy in creating and enforcing the social norms and archetypes (trait characteristics of the Anglo-Saxon groups) was the employment of the concept of race to help justify such myths as (1) there is such a thing as a pure race; (2) inherited genetic differences do produce cultural differences between groups; (3) there are innate intellectual or emotional differences between human groups; and (4) there is good reason to believe that there are disadvantageous biological consequences resulting from racial mixture. The concept of race helped justify a tidal wave of racial bigotry culminating in the National Origins Quota Act of 1924. The clear purpose of the act was to preserve the "purity of the Anglo or Aryan race in America," since the so-called "lower races," Orientals, Slavs, and Jews, were all to be excluded from America.

Amalgamation: Ideology of the Melting Pot

The ideology of amalgamation follows the central proposition expressed in the formula $A + B + C + D = E$, where A, B, C, D represent different social groups and E represents an amalgam, a synthesis of these groups into a distinct new group.

The ideology of assimilation and its slogan, "The Melting Pot," was one way some American minorities, having repudiated an overt and explicit devotion to assimilation ideology, could identify with America and become Americanized, without accepting the idea of assimilation. "Americanization" was not to be the embracing of an Anglo-conformism but the fusing of many nationalities and cultures into a new, composite American people, an amalgamation certain to produce a new, somewhat better, national stock.

Any serious inquiry into the ideology of amalgamation must take note of the fact that it is complete with flowery prose and poetry which, however noble its aims, gave minimal direction as to the exact results intended in the manifold spheres of social organization. For instance, it was never entirely clear what exactly was to be the nature of the amalgamation: a cultural or a biological mixing.[3] The former, although not easy, was more likely than the latter insofar as it called for immigrants entering the cliques, clubs, other primary groups and institutions of the core or dominant society and, in addition, placing their own mark on these social structures. If this was to be achieved, prejudice and discrimination must be absent—not a likely prospect.[4]

It is perhaps somewhat revealing to note that the ideology of amalgamation was much more psychologically meaningful than politically real for American minorities. Partisans of the ideology of America as one huge melting pot found it more facile to accept the reality of the American experience—prejudice, discrimination, poor working conditions, the shock of being uprooted, etc.—as long as they could believe that their experience would be temporary at best.

Cultural Pluralism: Ideology of Insular Pluralism

The ideology of insular pluralism may be expressed in the formula $A + B + C + D = A, B, C, D$, where A, B, C, D represent different social groups, and A, B, C, D represent these groups that, over time, maintain their own unique identities.

The ideology of insular pluralism is at odds with the two previously discussed ideologies insofar as they envisaged the disappearance of the immigrants' group as a social entity and the absorption of the later arrivals to America and their children into the existing American social structure. The goal of "Americanization," however interpreted, was not altogether shared by the immigrants themselves. Indeed, a situation like insular pluralism was the initial model in the United States during much of the colonial period, at least in terms of the segregated aspects of English-speaking peoples residing in New England and the southern colonies, the Dutch and Swedes in the Hudson and Delaware valleys, the German population almost exclusively located in Pennsylvania, Norwegian immigrants settled only in Wisconsin and Minnesota, and so on.

It is this pattern that Robert Park metaphorically characterized as "a mosaic of segregated peoples."[5] A segregated mosaic is repeated over and over again in every part of the United States even today. That is, certain parts of the country are demographically different as well as geographically different. Wilburt Zelinsky reports that each religious group holds a dominant position in only one part of the country; the pattern of religious affiliation thus is that the United States consists of numerous distinct religious groups.[6] Moreover, one can find both voluntary (Chinese in San Francisco) and forced residential (black ghettos) segregation within the overall pattern of American society.

The ideology of insular pluralism establishes an agenda of politics that encourages each group to engage in only one level of interaction with other groups, namely, in the polity. But beyond that, and only to ensure a voice in determining society's allocation of goods and services, no interaction between groups is called for. The ideology justifies individuals subordinating their broader interests to the overriding goal of immersion in their birthright ethnic group. Intermarriage is seen as a threat to ethnic insularity and communality. Indeed, the idea of the legitimation of numerous ethnic communities and their cultures is referred to as the embodiment of cultural democracy.

Cultural Pluralism: Ideology of Modified Pluralism

The meaning of the ideology of modified pluralism may be expressed in the formula $A + B + C + D = A_1, B_1, C_1, D_1$, where A, B, C, and D represent different groups, but A_1, B_1, C_1, and D_1 represent groups that are distinct from one another and are also different from A, B, C, and D. We can readily grasp that an Italian is different from a German, but an Italian-American is different from an immigrant from Italy. On this account a black African from Nigeria is different from an Afro-American. In the formula, each of the hyphenated-American minorities represents a group that remains a distinct but also assumes new cultural, political, and economic meanings in the context of the American experience.

Nathan Glazer and Daniel Patrick Moynihan, whose study of Negroes, Puerto Ricans, Jews, Italians, and Irish of New York City gives us basic insights into this doctrine, claim that each minority group becomes an agency of membership, for even after distinctive language, customs, and culture are lost, the group forms a basis for social identity, a way of members knowing who they are, as in the case of, "I am a Polish-American." Moreover, each hyphenated-American minority group, in addition to being connected by ties of family and friendship in its own time and place, becomes an interest group, politically and economically organized in order to receive a just distribution of the goods and services of the social order.[7]

The above suggests that the ideology of modified pluralism not only binds individuals to a group, informing a person where he or she belongs and whom one can trust, it also shapes the group in terms of political determinations. Ideologues of this stripe, ever alert to the persistent gap between the considerable power and benefits enjoyed by the Anglo-Saxon or white majority and what is possessed by less fortunate groups, especially the non-European minorities who were never allowed to assimilate or melt into the power structure of social institutions, assert the need for groups to wrest for themselves more specific advantages by forming political interest groups. Political parties and ethnic communities are basic to the accommodation style of politicking. In short, in its emphasis on divisible benefits and on the awarding of particular goods and services the accommodation strategy serves as the principle vehicle of political activity, specifying the terms of cooperation between diverse group interests.

Hence, the ideology of modified pluralism begins with the idea that where group interests intersect and conflict results, the conflicts are to be worked out from the viewpoint of a suitably defined situation in which each group is fairly represented, the public forum is free and open to all groups, and all have the means to be informed about the issues.

Structural Assimilation: Ideology of the Open Society

The meaning of this ideology may be expressed in the formula $A + B + C + D = 0$, where A, B, C, and D represent different groups and 0 represents no relative advantage or disadvantage to be had by anybody in the polity as a result of affiliation with a group.

The starting point of the ideology of the open society is a rejection of ethnicity, religion, or whatever as a basis for group association, particularly as these become political interest groups in the hope of determining the distribution of society's goods and services. The overall assumption is, then, that while factions might be necessary during periods of social transition, ultimately factions polarize society by perpetuating atavistic hatreds and prejudices. Mainstream followers of the open society acknowledge that group association, particularly political factions, has served in the past but its political salience must give way to a more democratic—that is, individualistic—civic participation together with wide distribution of the fruits of modern economic development. Ethnic attachments are judged "primordial," an attribute of earlier society, in which people's horizons were narrowly circumscribed and economic opportunities unnaturally curtailed. If the nation would conscientiously cultivate widespread and popular civic involvement and rationally plan for continued economic growth, ethnicity and other factionalism would be no more worrisome than it is among assimilated fourth-generation immigrants in America.

What is assumed in a secular open society—in which traditional ethnic, racial, religious, etc., differences no longer count—is that individuals will enter and engage in the political, economic, and social structures of society without respect to any group tie or affiliation. It is further assumed that over time, the various cultural differences between groups will become politically irrelevant in determining the distribution of goods and services. That is, groups will no longer delight in their differences and will tend not to mark off "in-groups" and "out-groups" but will live side by side, not finding anything seriously at stake in their cultural backgrounds.

II. FIVE IDEOLOGIES: CURRICULAR PROGRAMS

It has been shown that assimilation, amalgamation, insular cultural pluralism, modified cultural pluralism and the open society compete as alternative cultural ideologies. It will be helpful to examine the ways in which these can be used to help us understand various aspects of curricular reform being proposed today. Appendix B offers in simplified form the five ideologies and their curricular purport.

Ideology of Assimilation: Curriculum Program

Of the curricular programs to be considered, none is more easily grasped than the ideology of assimilation. Most of us have had some contact with it in some form or another and know it as a previously dominant American curricular program centered on Anglo-conformism. Overall, it suggests a curriculum concerned with eliminating cultural diversity by making over the various cultural groups in conformity with the dominant majority attitudes and values.

Nowhere in the teaching of history, for example, will the teacher attempt to put the minorities in touch with their own history; the strategy is to make an American—defined by the dominant majority—out of everybody. Thus literature and even the history books are peopled mainly by the dominant majority. Indeed the whole of schooling hews close to the point that to be human, accepted, and valued is to cherish the attitudes, values, and behaviors of the dominant majority. The definition of values, ideas, and purpose emanating from teachers, from the kindergarten through the university, hums in on one theme: to give up the old—to be modern—is to become better, liberated, more advanced, and more mature. Becoming assimilated, then, is a matter of learning to be something new and better. It is to imagine oneself in a different relationship to the family, the polity, the society, the universe, and above all, to others. Being willing to change is assessed as morally higher than wishing to preserve that status quo. And the more willing to change from the old to the new, the more likely one is to be judged acceptable, and the more likely one is to become the "most" American.

Hence, in the varied activities of the school—in discussions, lectures, cooperative ventures, athletics, textbooks, the reward system, etc.—two forms of prejudice and discrimination stand out and both are aimed at the "out-groups." One is, of course "racial," the other "progressive." According to the former, it is race that constitutes the "out-group's" inferiority. Classroom teaching thus focuses on the concept of race, showing, usually through selected empirical evidence, the "natural" superiority of the dominant majority.[8] Teachers and school personnel are ever on the lookout for the evidence of "proper" racial attitudes and values and quick to reinforce them through discrimination. Conversely, "improper" attitudes and values are punished and denigrated. According to the latter form of discrimination, it is the "out-group's" social and political backwardness that stamp it. Hence, school personnel remain ever alert to teaching the virtues of the dominant majority's tradition, and are prepared to negate by discrimination the "out-group's" clannishness, sense of ethnic community family network ties, and so on.

In short, a cultural imperialism marks the curricular efforts of the ideology of assimilation. An arrogance of power is exhibited by the need to "raise the consciousness" of the other cultural groups and free them from the narrow-minded influences of parents, kin, community, and tradition. Why? For their own good; in order for them to become functioning members of society.[9]

Ideology of Amalgamation: Curricular Program

The curricular effort of this ideology also suggests a type of schooling aimed at eliminating cultural diversity by bringing about a unified or amalgamated citizenry. In principle, the curriculum would promote intergroup schooling concerned with imparting positive meaning to what is judged to be a chaotic and unpredictable cultural diversity. A bias toward an order theory of society is revealed in the sense that the curricular focus is that the dominant majority will allow the "out-groups" to integrate or merge with each other, without embracing the attitudes and values of the dominant majority.

Thus the curriculum, especially literature and history, would necessarily focus on the wide range of cultural groups in order to point out or demonstrate the "best" or "preferred" elements that should be kept in the new amalgamated type. Teaching processes would focus on cooperation, cooperative attitude, sharing, submerging one's own interests in the larger, somehow better, group interest. Hence, some form of value free or methodologically pertinent strategy is necessary in order to effect the strategy of amalgamation. That is, class and group interests must be submerged in the free play of critical inquiry and constructive invention in society through, say, a "scientific" approach to inquiry, or some publicly common and so-called "value free" method which will help break down resistance to change and reform in the deep-seated atavistic pattern of cultural diversity. The crucial point of the method—of how, on the one hand, the present system is to be combatted, and how, on the other, the new system is to be instituted in its place—must be given a central position in the curriculum. Therefore, social problems hold forth as central in curriculum planning, such as "Problems of Democracy."[10]

If communal, kinship, nationalistic, religious, and other particularistic values can be replaced by a common, alleged to be value free, method for finding the common good or public interest, then a peaceful, non-manipulative, and non-divisive resolution of the "problems" of cultural diversity can be achieved. In this sense, then, the method of creative intelligence becomes a social value as well as a methodology in schooling.[11] For example, social class conflict and competition would be viewed as instrumentally inimical in schooling. Emphasis on the need to search for the "common good" by all contending parties in a social conflict as well as the subordination of personal and particularistic interests to it would be absolutely demanded of teaching and learning. Hence, there would be a social side of schooling that would be emphasized. Cooperation, the search for common interest, good temper in defeat, etc., are all happy conditions basic to this position.[12]

Ideology of Insular Cultural Pluralism: Curricular Program

In a society totally committed to insular cultural pluralism the school system would reflect a patchwork of cultural hegemonies. Ideally, each cultural group would have its own schools, teachers, textbooks, and control of these, all the while reflecting the values and beliefs of the group. The relationship between family, community, and schools would be very closely expressed in singleness of purpose and enterprise. At the heart of education would be the fostering of each group's distinctness, values, and fragility if not properly nurtured.

In a society where the ideology of insular cultural pluralism is merely one of the many competing for attention and position, then this view must struggle against other positions, particularly in the shaping of curricular programs. That is, if other ideologies and their programs tend to dominate, then the proponents of insular cultural pluralism would opt for the inclusion of ethnic studies (e.g., if native American, then Indian Studies; if Afro-American, then Black Studies; if Chicano, then Chicano Studies, etc.). Ethnic studies are seen as promoting the sharing of a common ancestry, culture, history, tradition, sense of peoplehood, an experience of "out-groupness," and the necessity to form a political and economic interest group.

Ethnic studies thus refers to not only a curricular program—history, literature, psychology, education, sociology, etc.—but to the objectives and methods comprising courses of study. Students are encouraged to develop positive concepts, generalizations, and theories about their cultural group. Hence, the curriculum focuses on students understanding prejudice and discrimination as tools of social conflict, but more importantly, as depriving minorities of a positive identity, or conversely, as creating individuals with a negative identity.

At bottom, the ideology of insular cultural pluralism (within a society dominated by other ideologies) celebrates cultural diversity and the "unique" differences or characteristics of the group. The curriculum is narrow only in the sense that it is examined from the vantage point of the cultural group. Of course, generalizations may be drawn and applied to a wide range of human behavior, with numerous comparative and conceptual considerations examined, but in theory Black Studies, Indian Studies, and Chicano Studies are to serve specialized needs: to help the student gain a clearer and positive perspective regarding his or her cultural group and what is in its best interest.

Ideology of Modified Cultural Pluralism: Cultural Program

This ideology assumes that any attempt to eliminate cultural diversity will prove ineffective at best and destructive at worst. On the positive side, it supports a view of curriculum in which cultural diversity is extolled as a good. But what must be understood is that although many immigrants from various nations of Europe experienced similar injustices in the form of prejudice and discrimination, each cultural group has been *modified* in the American experience. In other words, although cultural groups have experienced similar problems in the United States, each requires for its study and appreciation unique, specialized analyses and concepts. Hence, the assumption that schooling should lump the problems of diverse groups together—treating American European and non-European minorities as formed along the same general lines—obscures important distinctions between group experiences of a victimized "slave" and a "colonized" pattern and cannot serve the needs of America's minorities.

A generic focus within a curricular reform effort emanating from this ideology would go beyond the level of ethnic studies to multiethnic education, emphasizing the unique cultures of blacks, Hispanics, native Americans, and other cultural minorities *and* their experience in American society.

Multiethnic education, a rather specific form of multicultural education, forms the decisive backdrop against which cultural groups learn about and come to appreciate, and perhaps understand, the experiences of other groups and how they have been shaped in the American experience. In other words, it is assumed that there are significant distinct differences in the shaping of the various groups, at least in the American experience. Thus it is imperative to base curricular programs on such facts as ethnicity and ethnic identity since they continue to persist. Students are to be taught that, in terms of people's lives, cultural group association seems to have great appeal, offering a subtle, and highly cooperative, network of kinship ties—there is mutual economic assistance in time of trouble or sickness, help in occupational achievement, or sharing between families—yet the individuality of each conjugal unit is maintained so that a concurrent corporate and family life is possible. Moreover, ethnic groups, owing to their distinctive historical experiences, their cultures and skills, the times of their arrival and the economic situation they met, developed distinctive economic, political, and cultural patterns. As the old culture (A) fell away—and it did rapidly enough—a new cultural group (A_1), shaped by the distinctive experience of life in America, was formed and a new identity created. Polish-Americans might share precious little with Poles in Warsaw, but in America they are a distinctive group that maintains itself, is identifiable, and gives something to those who are identified with it, just as it also gives burdens that those in the group have to bear (Polish jokes, for example).

The curriculum of modified cultural pluralism, therefore, makes central the study of various ethnic groups for the purpose of distinguishing similarities as well as differences between cultural groups. The goal of multiethnic education is to make students aware of the cost of being Americanized and to extoll the virtues of cultural diversity in terms of groups being modified over time in the United States.

Ideology of the Open Society: Curricular Reform

This ideology postulates a thoroughly modern, secular society. Ethnicity is seen as a nuisance, even a danger; religious, racial, nationalistic, and kinship ties are viewed as obstacles that must be analyzed so that students can come to understand their negative influence. It is assumed, for example, that when ethnic identity takes over the task of self-definition—"I am an Italian-American"—society is divisive because those entrusted with decision making affecting large numbers exploit self-definitions and play on historical hatreds and fears. Moreover, cultural groups exploit one another, alleging various "offenses" in defense of ethnic and group turfs and privilege. Or worse still, ethnicity may be used as a cover for racism, meaning that people are encouraged to see the world primarily in limited or narrow categories—in black, white, or yellow—insisting all the while that one should be up and the others down.

In this view, ethnicity and ethnic identity can be used to order society, educational policy, curricular efforts, etc. in the short run, but eventually they curb progress and blind individuals to their full capacities. Groups founded on ethnic allegiance compete with the nation-state. Such competition is intolerable because the nation-state is the principle vehicle of individual growth and development. Accordingly, ethnic groups are not acceptable because allegiance to them obscures the public interest by rendering the individual into the particularistic spheres of kin, group, family, community, religion, etc.

The concept of a modern, secular society and its curricular program would make central civic and citizen well-being as opposed to the sheltering and distribution of society's rewards along the lines of ethnic or cultural communality. An essential element in the curriculum would be a study of the political system and its appropriateness in terms of the degree of centralization versus the individual citizen as opposed to, say, a structural formula of politics based on any given majority-minority relationship. Non-ethnic demands, for example, citizen well-being in the form of requisites for economic security, would be necessary and fruitfully examined in this view.

The burden of the foregoing is that a conscious civic involvement and plans for economic growth would be central to curriculum development. Strategies for combatting the possibility of alienation of the individual and centralized injustice in the name of rational economic planning, examination of techniques to solve problems in economic, political, and international affairs, and methods for staying informed about the interstices of macro trends in politics and economics would form the heart of curriculum making.[13]

Hence, the curriculum would consider paramount the teaching, interpreting, and explaining of symbols translatable into economic and political terms by which we ordinarily describe and justify the large-scale, impersonal, secular, corporate structures of modern society. One such symbol is that of "public interest." The new curriculum would suppose a view that the "public interest" is good insofar as public interest policy will benefit a parent not as a parent but as a member of the public, along with everyone else; and all citizens will benefit under the same description, that is, as members of the public. By contrast, a society dominated by ideologies promotive of cultural diversity does not opt for strictly public-interest policies but what benefits members of the group under different descriptions as, for example, WASP, black, German, Irish-Catholic, etc.

In sum, the ideology of the open society and the curriculum it favors would center on the attainment of a common good or public interest. The attempt to foster this goal in schooling necessarily involves continuous integration of beliefs-in-relation-to-action centering on the common system of belief that such a society is the best for all concerned.

IV. IN CONCLUSION

In presenting five ideologies of cultural diversity, no claim was made as to exhaustiveness. In putting things in this way, I have tried to show that cultural diversity is a necessary condition for alternative, and sometimes diametrically opposed, cultural ideologies. In doing so I have also tried to show that "cultural diversity" is not identical to "cultural pluralism," and that the latter is ambiguous insofar as it may refer to either "insular" or "modified" cultural pluralism. The problem was that of showing that the five ideologies have different curricular programs and there would be, if recognized, a similar sharp line in educational practice.

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1. The generalizing, simplifiying function of the ideologies of cultural diversity is that they mobilize belief and action not in the sense of *causing one to do* but in *giving one cause for doing.* They provide grounds or warrants for the political, economic, social or educational (hence curriculum) activity engaged in. See Richard Pratte, *Ideology and Education* (New York: David McKay, 1977), and "More on Educational Slogans: A Possibly Effective Model for Analyzing Slogan Systems" in *Philosophy of Education 1977:*

Proceedings of the Thirty-Third Annual Meeting of the Philosophy of Education Society, ed. Ira Steinberg (Worcester, Mass.: Philosophy of Education Society, 1977), pp. 120-30.

2. I am indebted to William M. Newman for the formula given here. This is especially true regarding four of the five formuli offered as the ideologies of cultural diversity. Newman's work deserves the attention of the thoughtful, scholarly student of education. See William M. Newman, *American Pluralism* (New York: Harper & Row, 1973), especially Chapter 3.

3. However, Milton M. Gordon pointed out: "In actual fact, it would appear that all racists, insofar as they have conceded the right of any of their disfavored groups to be present in American, and not withstanding their pessimism as to the success of the assimilation venture, have been Anglo-conformists; but the converse is not true—all upholders of Anglo-conformity have not been racists. The non-racist Anglo-conformists presumably are either convinced of the *cultural* superiority of Anglo-Saxon institutions as developed in the United States, or believe simply that, regardless of superiority or inferiority, since English culture has constituted the dominant framework for the development of American institutions, newcomers should expect to adjust accordingly."

4. The fact is, of course, that the ideology of the melting pot was not considered to apply in any great numbers to the black American, the native American, and the Hispanic minorities, only a few of whom were allowed to become assimilated and as groups have been denied complete assimilation in the United States.

5. Gordon, op. cit., pp. 110-13.

6. Robert E. Park, "Forward," in Louis Wirth's *The Ghetto* (Chicago: University of Chicago Press, 1928), pp. ix-xi.

7. Wilbur Zelinsky, "An Approach to Religious Geography of the United States" in *Annales of the Association of American Geographers*, Vol. 51 (June, 1951), pp. 139-193.

8. They tell us: "Beyond the accidents of history, one suspects, is the reality that human groups endure, that they provide some satisfaction to their members, and that the adoption of a totally new ethnic identity, by dropping whatever one is to become simply American, is inhibited by strong elements in the social structure in the United States." (p. xxxiii)

They go on to explain: "The assimilating power of American society and culture operated on immigrant groups in different ways, to make them, it is true, something that they had not been, but still something distinct and identifiable." (p. 13-14) Finally, *"The ethnic group in American society became not a survival from the age of mass immigration but a new social form."* (p. 16): Nathan Glazer and Daniel P. Moynihan, *Beyond the Melting Pot*, 2nd ed. (Cambridge, Mass.: MIT Press, 1970).

9. The converse of this point should not be lost. Bowles and Gintis report that, "An essential theme of the testing movement (in schooling) was the uniting constitutional character of human excellence, as rooted in genetic endowment....Immigrants, tests showed, were particularly prone to low intelligence. Professor Henry Goddard's 1912 study, sponsored by the U.S. Immigrant Service, found that 83 percent of Jews, 80 percent of Italians and 87 percent of Russians were feebleminded, based on 'culture-free' tests." See Samuel Bowles and Herbert Gintis, *Schooling in Capitalist America* (New York: Basic Books, 1976), p. 196.

10. We might note that the various cultural groups sometimes ask: Is it ethical or prudent to have our children confronted with textbooks we regard as blasphemous or pernicious, to confront our children with teachers regarded as "change agents" of a change deemed or judged evil? The notion of cultural imperialism is raised because the curriculum, quite literally, is a way of telling students that "we have to destroy your culture in order to save you." People who resist the school's efforts are commonly regarded as "problems" to be dealt with, not as having opinions to be respected.

11. The reader familiar with John Dewey's work will recognize the close parallel between the ideology of amalgamation and its curricular import and Dewey's educational theory. This relationship is not merely coincidental. Dewey was a cultural amalgamationist, at least in terms of the role of the school. See John Dewey, "Nationalizing Education" *Journal of Proceedings and Addresses of the National Education Association* (1916). He said "the American...is international and terracial." (p. 184); in 1918 (America in), "We

are truly interracial and internationa." (p. 644) Sidney Hook reported that Dewey considered himself a "cultural pluralist" in "The Snare of Definitions," *The Humanist* 31 (September/October, 1971), p. 11.

12. The last point is crucial. It not only offers the basis for the curriculum but more importantly, it raises the importance of schooling to the highest level. It is school and schooling that is to prepare the way for planned social change—the amalgam—and it is intended to exert its educative influence in the strongest defense of the melting pot. Patience and forebearance in the face of cultural diversity is a virtue, but patience may mean defeat in the long run. One cannot be too patient with the amalgamation process. It must be attended to, nurtured at each and every teaching session, and ultimately school and its effort will replace cultural diversity.

13. Conversely, the curriculum would stress the belief that symbols and beliefs drawn from, say traditional religions are no longer adequate for the contemporary world of the open society. Their origin is in a cultural system based on interpersonal and familial loyalty. Extended to include the impersonal structures of the social and physical world, their symbolic message becomes attenuated, if not actually unintelligible. This judgment implies no great disrespect for the world's major religions, but insightful as they may be, they are not adequate for interpreting and understanding individual and nation-state commitment and relationship, especially in a context of impersonal structures. The symbolism of religion makes sense, a great deal of sense, in the interpersonal relationships within the family and local neighborhood, but not within the larger institutional structures of nation-state and international corporations.

APPENDIX A
Cultural Diversity and Ideology

Cultural Diversity		Goal	Ideology
A, B, C, D	=	A	Assimilation
A, B, C, D	=	E	Amalgamation
A, B, C, D	=	A, B, C, D	Insular Cultural Pluralism
A, B, C, D	=	A_1, B_1, C_1, D_1	Modified Cultural Pluralism
A, B, C, D	=	0	Open Society

APPENDIX B

The Relationship Between Ideologies of Cultural Diversity and Curricular

Ideology	Curriculum Focus	Hope-For-Results
Assimilation	Study of Anglo-Saxon values and attitudes with a nationalistic bias.	Students develop an attachment to Anglo-Saxon attitudes and values.
Amalgamation	Study of intergroup and cultural interaction designed to break down relationships between groups.	Students become culturally and biologically the amalgam of the "new" American type.
Insular Cultural Pluralism	Ethnic Studies—Secular and humanistic study of ethnic groups as people sharing a common ancestry, culture, history, sense of people-hood, and common experience in American society.	Students learn about the role of ethnic groups and learn how to participate in the polity while remaining ethnically "uncontaminated."
Modified Cultural Pluralism	Multi-ethnic studies—Different ethnic groups and culture studied, with focus given to a wide range of American cultural groups, their common problems and struggle to maintain their distinctiveness.	Students learn about the histories and experiences of ethnic group in the American experience, clarifying and studying the function of such terms as "prejudice," "discrimination," "identity conflict," etc.
Open Society	Secular and individualistic studies stress that differences of race, religion, national origin, etc., are irrelevant in determining the nature of acceptable primary and secondary associations. Human development taught in terms of personal identity occuring in relation to the civic community, the professions, and vocation.	Students learn to form personal identity in the civic community and are indifferent to matters of racial, religious, and ethnic distinction because these distinctions cease to have practical consequences in the society.

RESPONSE TO PRATTE

Joe R. Burnett
University of Illinois at Urbana-Champaign

The mathematical-like formulations which Professor Pratte introduces can serve at once to allow me to summarize the qualitative distinctions which he wishes to make and also to suggest a question which bears upon his presentation.

1. $ABCD = A$	Assimilation, conformity to the standards of a dominant "pure type" group
2. $ABCD = E$	Amalgam or "melting pot," a fusion and sameness
3. $ABCD = ABCD$	Mosaic, insular pluralism, an aggregate or "salad bowl"
4. $ABCD = A_1B_1C_1D_1$	Hyphenation, accommodation, modified pluralism
5. $ABCD = O$	Open society, structural assimilation

The question that is suggested pertains to the nature of O in the fifth formulation: is it of the same order as, say, the *E* in the almagam scheme; and, if so, then how is the formulation different from the almagam one? I will argue that the O is of a vastly different order, and that its requirements are those of the destruction or erradication of cultural diversity, and not just what is ordinarily meant by "assimilation" (i.e., "making similar").

The basic argument Pratte uses is familiar: it is the age-old argument of the One and the Many, which carries persuasive weight because there is the appearance of our being presented with a problem of simple quantification. Actually, in social philosophy, the many parts have values "loaded" into them, and so does the one while or whatever alternative wholes which might be envisioned.

There generally is a bit of legerdemain involved in all of this. Pratte observes that the entity or entities on the right hand side of his equations must represent a "concept of the Good Society." But, what about those on the left? He says at the outset only that each letter will "stand for a cultural group, be it religious, racial, national, etc....and we do not need to know what the differences are, preferring one to another." What he does not tell us, is that we are not going to be allowed, actually, to accept any of the parts as preferred.

As the discussion proceeds, historical associations are selectively made so that the parts come to represent dangerous partiality, factions come to be considered dangerous factionalism. These are my expressions, not his; but, they summarize the trend as the parts and wholes (except for *O*) become interpreted as having engaged in false claims, non- or anti-scientific argumentation, selfishness, and other forms of undesirable behavior almost exclusively—maybe *necessarily* in times past, but almost exclusively. Thus, of ethnic attachments, for instance, we come to this generalization from history: "Ethnic attachments are judge 'primrodial,' an attribute of an earlier society, in which people's horizons were narrowly circumscribed and economic opportunities unnaturally curtailed." And, if we were to do the correct thing, "ethnicity and other factionalism would be no more worrisome than it is among assimilated fourth-generation immigrants in America."

Historically, there is only this to be said for factions: "The overall assumption is, then, that while factions might be necessary during periods of social transition, ultimately factions polarize society by perpetuating atavistic hatreds and prejudices."

Pratte simply does not seem to entertain the notion that human societies *always* are in transition; and, that "*ultimately*" is not upon us nor is it either unambiguously prefigured or implied in what has been or is.

He has broken the bonds of history when he comes to the open society. Notice that a negative evaluation does not attach to parts or whole in his open society. There are two reasons for this. First, they are nonhistorical entities. Second, the parts are not real parts. The equation does not actually read

$ABCD = O$

but

$0 = O$

for there are no social *differences* to be allowed between *ABC* and *D*: they *cannot* be *genuine* factions or parts, but only seeming or momentary ones.

We are led into a situation in which we have gotten rid not only of factions but very close to all differences beyond biological and cosmetic ones, like an Hegelian night in which all of the crows are black. How Hegelian it is, I don't know; but, consider the following, from the discussion of the open society's curriculum:

> Groups founded on ethnic allegiance compete with the nation-state. Such competition is intolerable because the nation-state is the principle vehicle of individual growth and development. Accordingly, ethnic groups are not acceptable because allegiance to them obscures the

public interest by rendering the individual into the particularlistic spheres of kin, group, family, community, religion, etc.

To be consistent, I submit, what Pratte should have done here is draw an argument parallel to his others, this one associating the nation-state with all of *its* negative embodiments. I cannot see how, except that one selectively loose himself from historical bonds, as Pratte does, that national sovereignity can be judged one white better, less atavistic and prejudicial than the other groups he mentions within history.

Of course, the whole matter of looking at only the negative side of groups historically is wrong. A counter proposal might be that we study how human groupings arise from conditions of deep intimacy to promote fellow feeling not only within the groups themselves, but within others as well. We see it occurring sometimes in some racial groups, in some ethnic groups, in some religious groups, even in some national groups.

It is even plausible that only a measure of deep partiality can provide the intimacy which allows groups to exist. If this be true, and partiality is not necessarily exclusiveness, then there is an added reason for insisting on freedom of individual associations in whatever various ways answer to individual needs--observing only the experience-warranted proviso that those associations not violate the rights of others also to form associations.

What this would mean for historical analysis would be that we also study and generalize about the socially creative responses of groups, the positive contributions which they have made for their members and the species. If I am not mistaken, Pratte has done something like this, but he has made the mistake of factoring out exactly the one thing which is a requirement of the analysis; *viz.*, partiality, without which a group is not a group in any distinctive sense.

SCIENCE, PROGRESS AND PEDAGOGY

Francis Schrag
University of Wisconsin–Madison

This essay contains fragments of a larger (as yet incomplete) work tentatively entitled, "On the Possibility of Progress in Pedagogy." This larger work will endeavor to formulate a general theory to account for the fact that certain human activities exhibit progress while others do not. In particular I want to understand why pedagogy has not progressed noticeably over the centuries and I want to be able to identify the kinds of advances in research or development which have the potential of leading to a more potent pedagogy.

The heart of the matter, as I see it, lies in being able to explain under what conditions and for what reasons advances in knowledge and understanding can (or cannot) be translated into advances in practical efficacy. What follows is first a discussion of the ways in which advances in knowledge can lead to advances in practice and an enumeration of the conditions under which such a translation from knowing more to doing better will not occur; second, a brief discussion of the meaning of "progress" in the domain of pedagogy, and finally a brief consideration and rejection of two arguments designed to show that progress in pedagogy is either impossible or undesirable. I am well aware that the paper does not address many of the most vital questions in the area. Nevertheless it does, I believe, initiate an inquiry which is both theoretically challenging and practically significant.

In our minds, progress in various enterprises is so closely linked to progress in scientific understanding that we see little need to disentangle the two. But this is precisely what needs to be done if we are to understand why progress takes place more easily or at a more rapid rate in some domains than in others. A naive account would have progress in enterprises such as medicine or construction dependent on scientific progress in a straightforward way. But this naive view of a simple linear relationship between progress in science and progress in other enterprises fails to account for two phenomena: (1) cases where an activity has been pursued at an adequate or even an optimal level though scientific understanding of the activity is very recent or very rudimentary, and (2) cases where scientific inquiry progresses without any corresponding improvement in those activities which make use of earlier scientific findings in the same area. Examples of the former are human speech and the design and manufacture of metal parts to resist fatigue. An example of the latter is offered by Mario Bunge, "...an applied physicist engaged in designing an optical instrument will use almost only ray optics, i.e. essentially what was known about light towards the middle of the 17th century."[1]

If we are to understand fully the relationship between progress in scientific inquiry and progress in other human enterprises we must first try to understand *how* progress in science can lead to progress in other enterprises. That is, we must understand how scientific understanding of phenomena makes it possible for us to make something better or perform better or more effectively than we did previously. A useful place to begin is Stephen Toulmin's illuminating analogy between maps and scientific thoeories. Many physical systems, notes Toulmin, can be "mapped" in much the same way that the three-dimensional physical world can be mapped onto a two-dimensional piece of paper,

> Having made a limited number of highly accurate observations on these systems, one is in a position to formulate a theory with the help of which one can draw, in appropriate circumstances, an unlimited number of inferences of comparable accuracy.[2]

Toulmin contrasts the map (theory) with an itinerary (technology). A map,

> represents the region mapped in a way which is indifferent as between starting points, destinations and the like. An itinerary, however, is specifically concerned with particular routes, starting points and destinations. Often enough, of course, a map may be used to work out the itinerary for a particular journey, and from one map an indefinite number of routes may be read off, as occasion requires.[3]

Toulmin notes correctly that itineraries are not dependent on maps, that travelers relied on itineraries for a long time before they had suitable maps. Moreover, we may imagine the development of improved itineraries to have its counterpart in the development of an empirical rather than a scientific technology. How then do maps help us to find our way? There are two rather different ways in which a map can assist us and we need to distinguish them: traveling known routes more efficiently and discovering new routes. Let us consider each in turn. Using a map can make our travel more efficient in various ways: by its use we may select from among many routes the easiest, the most scenic or the fastest way to get to our destination: by making calculations with the help of the map we are saved from detours which can be costly or risky. We know just how much time to allow, how much gas we'll need, etc. In a similar way, the engineer may, with the help of a scientific theory select from among many materials and designs the one best suited for a particular job; he can prevent costly mistakes, avoid risks, estimate the time and resources needed for a job, and so on.

We need to point out, however, that the translation from a map to an itinerary is not unproblematic. Any particular map is unlikely to convey all the information on which the design of the itinerary depends. A road map will not indicate certain information about the roads which may affect travel; for example, routes normally used by commuters at rush hour. A road map will not, moreover, usually indicate features of the terrain or climate which may be relevant to a decision of whether to have the breaks relined or snow tires put on. Separate maps representing climate and topography are needed for this. Nor will the road map indicate where accommodations are located, how much they cost, where to get gas, etc. Here again, other maps are required. For hikers and campers a trail map may be needed to furnish particular kinds of detailed information about a region. And so on. Even the most complete and accurate sets of maps of the area will not represent every feature a traveler could deem relevant; a particular noble spruce tree just off the road, a grandiose view to the valley especially beautiful in late afternoon, etc. And even if we could imagine a map representing all these features, unless a new one were produced every second, it could not represent events which cannot be frozen in time—a skunk just hit by a car, an empty bottle dropped from a passing truck, a sudden squall, a drunken hitchhiker. Yet each of these events is capable of turning a routine trip into a hilarious adventure or a shattering nightmare. Scientific theories and laws, like maps, are always to some extent, "formulated in a manner indifferent to particular contexts."[4]

Now it might be thought that these considerations call into question or undermine the use of maps, but the opposite is the case. If the map did not simplify the actual terrain's complexity, representing certain features and ignoring others, there would be no way of representing a vast amount of geographical information on a small sheet of paper. The usefulness of the road map for the traveler derives from the very fact that the information represented is that which has been selected because it is most essential for efficient traveling, information needed for the traveler to make certain *basic* decisions but clearly not all the decisions a traveler must make. It is also worth pointing out, however, that the map's usefulness derives from the relative stability of the *terrain.* A map of ancient Rome would be of limited use to the contemporary tourist.

The difficulty of deriving an itinerary from a road map alone, has its counterpart in the difficulty of deriving a design, a set of decisions for doing something, say building a bridge by applying one or two physical laws like Hooke's Law and Euler's formula for calculating maximum permissible stresses on the struts. These formulae take no account, for example, of the effects of changes in temperature or of the effect of winds, or of corrosion due to humidity. Here other equations, other theories must be introduced. The design of a modern gear, for example, involves technical considerations of "gear geometry (gear tooth design and kinematics), gear stresses (load as related to geometry), gear tribology (load interaction of concentrated contacts) and gear materials (strength and manufacturing techniques)."[5] To illustrate the complexity involved, the durability and strength of gears of carburized steel are related to gear size (that is width and pitch diameter) by means of two equations (depending on the type of gear) which contain thirteen variables and several constants. To calculate the contact stress at the most severe position on the tooth surface, an equation containing seventeen variables is used.[6]

Neither the scientist nor the engineer can afford to ignore the multiplicity of factors that may be affecting a particular phenomenon. But the scientist in trying to confirm a law or theory acknowledges extraneous influences only in order to be able to ascertain the degree of interference they cause to the two or three features of the situation on which he is focusing. The engineer must, on the other hand, include in his calculations all the factors which may have a bearing on the performance of his design. This is one reason why scientific discovery is not automatically transmuted into improved ways of doing things. So, to take a couple of examples, the idea of the parachute was known for ten generations before the first actual jump was made in 1783, and the scientific basis of the airplane was known more than two hundred years before the Wright Brothers first actual flight.

The example of the airplane illustrates the second way in which scientific understanding contributes to progress in other domains—by suggesting new "itineraries," new ways of doing things only dreamed of previously. To cite one example, D.L.S. Cardwell, a historian of technology, traces man's conquest of flight to the discovery of the atmosphere by Galileo, Torricelli, Viviani, and Pascal. Prior to that time, notes Cardwell, "suggestions for flying machines, had from ancient legends down to the more sophisticated ideas of the renaissance Italian artists and engineers, all been based essentially on the principle of imitating birds.... If, however, we recognize that the air is an Archimedean fluid physically different from water only in that it is lighter and happens to be compressible, then we can conceive of a boat to float on or in the air just as ordinary boats float on or in water.[7] Man's conquest of the air in the 18th Century began with the balloon not the airplane and Cardwell asks whether the hot air or hydrogen balloon could have been invented empirically.

"The answer is almost certainly no. It is one thing to know that hot air rises—as indeed Aristotle remarked—but it is something quite different to interpret this phenomenon in Archimedean terms and to calculate that it should be possible to harness the positive buoyancy of a large volume of hot air, or of hydrogen, to lift not merely the fabric of a balloon but also the gondola, its shrouds and the "pay-load."[8]

As this illustration shows the cartography analogy is somewhat misleading when it comes to the potential of science to generate new inventions. For although the study of a map may suggest untrodden routes to desired destinations, the terrain must be fairly well explored *before* the map can be drawn. Nor will the novelty of a new itinerary come as a shock to experienced travelers. The invention of the scientist-technologist is more like that of a new vehicle than a new itinerary. Now a new invention may be said to originate in the discovery of a scientific law or the formulation of a new theory, that is, on a new "mapping" of natural phenomena. But here the cartography analogy is again misleading. For the new "map" generally does not represent features of the terrain with which we are already familiar; rather, it represents features which normally remain concealed from us, features we cannot just stumble on in our ordinary travels.

I have here distinguished two ways in which progress in science contributes to progress in other activities. It enables us to do efficiently what we already know how to do, albeit in a crude, trial-and-error fashion which may be either very costly or very risky or both. And it enables us to invent new means of harnessing natural powers in order to reach goals hitherto unattainable, perhaps even undreamed of. Where one draws the line is of course arbitrary to some degree. And most machines, devices and processes in current use owe something to both kinds of advance.

II.

Having identified the modes by which a scientific advance can be converted into a technological improvement, we may also formulate conditions under which such a conversion will not occur. There are several kinds of cases.

The first arises when no scientific theory or law could enhance our powers because our "natural" interactions with the world provide us with as much control as we need or desire. The discovery of the law or theory to which our natural reactions conform would therefore be superfluous from the practical point of view. The linguists' discovery of the laws and structures to which our utterances conform would add nothing to our eloquence. A chef's proficiency is not (except under certain circumstances) enhanced by a study of biochemistry. Michael Polanyi's illustration of the law observed by a cyclist in balancing his bicycle is another case in point.[9] (The cartography analogue here is that of a blueprint to our own home. Such a blueprint would add nothing to our ability to find the bathroom from the living-room.)

Second, there are circumstances in which we do depend on scientific understanding but where a relatively crude or superficial theory or set of scientific laws permits us a sufficient degree of control of phenonema to achieve desired results. The phenomena may exhibit divergencies from predicted values but these departures from expectations are not of such a magnitude as to frustrate our ambitions. Here the engineer parts company with the scientist.

For the latter, such deviations may be exceedingly significant for they may suggest the need for a much deeper or more comprehensive theory. But for the former, the discovery of a deeper theory may well add nothing to his ability to operate successfully at the level needed to achieve results. In fact the phenomena explained by the deeper theory may be masked at the level at which he must operate. This is not to say that this scientific discovery is necessarily barren of practical import; only that it may be irrelevant to a particular practical enterprise. So, for example, the designers and builders of automobile engines do not benefit from advances in quantum mechanics. As Bunge, one of the few philosophers to take an interest in technology notes,

> many possible rival theories can yield practically the same results...The technologist, and particularly the technician, are justified in preferring the simplest of them: after all they are primarily interested in efficiency rather than in truth; in getting things done rather than in gaining a deep understanding of them. For the same reason, deep and accurate theories may be impractical; to use them would be like killing bugs with nuclear bombs.[10]

(To preserve the carography analogy we might say that the vacationer planning a cross-country trip would not profit from having a set of detailed U.S. Geological Survey maps of every square mile of his projected itinerary.)

There are also cases in which, although our practical efficacy is limited and although scientific advances continue to be made, the contribution of these advances to the solution of practical problems is not sufficient in some contexts to supplant cruder approaches. Since this case has, I believe, particular relevance to the discussion of pedagogy below, let me introduce an example, weather forecasting. Here we don't try directly to control the phenomena, of course, but rather to predict them in order to take appropriate practical action.

Imagine the *usefulness* of a map of a terrain where a fierce battle is raging. Particular roads and bridges may have been blown away; fields may be mined. The location of enemy troops may be constantly changing, etc. The map is not altogether useless now but many of the predictions a traveler could formerly make with confidence are undermined. Not even reports of those who have recently traveled the same terrain are worth putting much stock in.

Let me summarize the argument thus far:

(1) For progress in other domains to derive from the advance of scientific understanding such an advance must either permit a more efficient practice by reducing the need for trial and error or it must point to the utilization of novel means for attaining desired ends.

(2) The translation of a scientific advance into a practical advance will not occur when

(a) the advance leads to a necessary but not sufficient solution to a practical problem, or

(b) the practical solution is only apparent due to hidden risks or costs, or

(c) the means available without recourse to *any* scientific understanding are already sufficient for the purpose, or

(d) the advance occurs at a level of depth or subtlety which exceeds that required for obtaining practical results.

III.

I should like now to direct my attention to the problem of progress in those activities in which the "material" to be acted upon is human beings. The main activities in this domain are pedagogy and psychotherapy, but my discussion will focus on pedagogy. First we need to get clear about what progress means with respect to pedagogy. Are today's teachers able to accomplish results which their ancestors were unable to? The answer depends on how we interpret the question. For example, thousands of teachers are able today to transmit a set of intellectual tools the invention of which depended on human genius of the highest order. I am thinking here of the calculus, for example. What was once understood by only a small coterie of gifted men is today the common property of every engineer and of many thousands of teenagers in Western society. Yet this achievement does not seem due to any *pedagogical* advances, that is to say to any improvement of the transmission process itself. To inquire about progress in pedagogy is to ask whether today's teachers are able to teach more in the same time interval than their ancestors, to teach the same in less time or to successfully teach students once believed unteachable or to routinely convey understanding of subject matter once believed untransmissible. The answer seems to be (with some exceptions and qualifications): no.

Anyone inclined to doubt this should consult some of the illustrations of precocious intellectual achievement in the 16th and 17th centuries given by J.M. van den Berg in *The Changing Nature of Man.*[11] I cite just one example from the 16th century. "Of (Theodore Agrippa) d'Aubigne it is told that he read Greek, Latin, and Hebrew when he was six years old, that he translated Plato into French when he was not yet eight."[12] These achievements certainly did not arise without instruction. And although d'Aubigne was clearly a prodigy even for that period, accomplishments of that kind were not nearly so rare as in our own day. There seems to be little doubt therefore that pedagogy has not exhibited the kind of progress found in medicine or engineering. An Archimedes or a Galen would marvel at the accomplishments of their distant descendants today; yet a Socrates or a Quintilian would certainly not stand in awe of the accomplishments of today's pedagogues although they might be astounded at the institutional and technical machinery now considered essential to the enterprise.

Depending on the proclivities of the thinker, reflection on this fact may engender one of two sorts of responses: that the quest for progress in pedagogy is either futile or that it is dangerous. (A third possible response, to wit, that pedagogical science is still in its infancy and must wait for its Pasteur to make more than the halting strides it has made in the last two millenia, cannot be treated here.)

Philosophical analysis of the concepts used in talking about teaching and learning may be thought to offer a demonstration that a progressive pedagogy is impossible. I shall briefly consider two such arguments. The first argument might be derived from Tom Green's analysis of teaching and learning in *The Activities of Teaching.*[13] Green, making use of what is called the task-achievement analysis, claims that the relationship between teaching and learning is neither analytical nor causal. Presumably if the relationship is not causal then it is futile to try to enhance learning by improving teaching. Green's argument to the effect that teaching is not the cause of learning seems to rest on the fact that teaching can occur without learning and vice-versa, that is, teaching is neither a necessary nor a sufficient condition for learning. Now, ironically, Green's argument, itself, rests on an unsatisfactory analysis of causation. It is unsatisfactory because unduly restrictive, failing to encompass some very familiar uses of the idea and language of causation. We may legitmately say, for example, that a penicillin injection caused a person to recover from an infection without implying that the penicillin was either necessary (tetramycin might have had equally good results) or sufficient (bed rest, proper cleansing of the infected area, proper diet, etc. were also needed). Green seems to think that if teaching were the cause of learning then we could expect to find a universally successful recipe for producing learning in every case. That would be like saying that the relation between the ingestion of a drug and a person's subsequent recovery from illness could not be causal otherwise we would be able to discover an infallible way of curing every illness. There are not infallible ways of achieving success in *any* enterprise but this hardly means that the language of cause and effect is out of order.

A second argument by Rudy H. Liveritte criticizes an analogy Dewey suggests between teaching and bridge building. Dewey is purported to suggest that in the future a scientifically based pedagogy might be compared to today's as the building of modern bridges compares to man's earliest bridges built without use of mathematics and physics. But the analogy is misleading says Liveritte,

> The difficulty here is that, the more teaching is imagined to approach the status of genuine applied science—think, for example, of the apoth-

> eosis of this idea as giving a student a shot which would directly transfer knwoledge from one brain to another—the less it continues to be recognizable as anything one would be inclined to call teaching.[14]

One could just as well argue that progress in manned flight ceased with the development of rocketry because the new craft became less and less recognizable as anything one would be inclined to call an airplane. Despite much worthwhile material elsewhere in his paper, Liveritte's argument here demonstrates nothing beyond the bankruptcy of a certain mode of linguistic philosophizing.

Among those who find the notion of a progressive pedagogy possible in principle, not all would find it a welcome prospect. Two lines of argument might in fact contend that the search for a progressive pedagogy is misguided and possibly dangerous. Both arguments are grounded in a suspicion of the instrumental reasoning involved in the quest for advancement in pedagogy. The first argument warns us of the social and personal values which in any such effort will invariably be smuggled into the situation under the guise of scientific objectivity. Why invariably? The argument takes this form: Any attempt to advance pedagogy must employ some standard of success and failure. Such a standard would have to permit reasonably objective appraisal of student progress. The instruments needed to assess student progress are therefore sure to focus on the performance of tasks in the cognitive domain, ignoring the manifold ways in which a particular pedagogic setting, strategy or technique can influence the attitudes and values of students in subtle and subliminal ways. These emotional and attitudinal side-effects are likely to be deleterious but, as with the effects of certain drugs, cumulative and difficult to detect. As a result the progressive pedagogy will carry with it a set of partisan social values which may be very difficult to counteract precisely because its power blinds us to these subtle but pernicious influences.

As a way of alerting us to the risks of "progress" such an argument is valuable, but as an argument to foreclose the search for a more potent pedagogy it is not convincing. There is no assurance that the values embedded in the new pedagogy will be less desirable than those at work using present approaches. Nor is it guaranteed that the benefits of a more powerful pedagogy must be outweighed by the deleterious effects on the students of the values transmitted in the process. Finally there is no reason to preclude the possibility that a more potent pedagogy could be placed in a social setting in which these supposedly deleterious side effects were effectively counteracted.

The second argument focuses on the pedagogical interaction itself; this time it is alleged that the quest for pedagogic progress demands an instrumental perspective which will undermine the face-to-face encounter of pedagogue and pupil. The teacher in trying to facilitate the student's growth in *particular* directions, it is argued, will be precluded from relating to the student with the candor and openness which mark authentic human relationships. Once again, I believe it is essential to distinguish between the sounding of a useful cautionary note and the adoption of a dogmatic position of opposition to the possibility of progress in pedagogy. Carried to its extreme, such opposition must extend to almost every form of pedagogic (or therapeutic) intervention whether by teachers or parents. For the teacher (or parent) whether acting directly or indirectly always desires his work to lead to some outcomes rather than to others. The cast of mind required always has some element of the form "I do a (not b) so that the student will y (and not z), and I want the student to y (rather than z) so that he may become more m (rather than n). It is true that an unduly narrow focus on the pupil's y-ing can have disastrous consequences but it is foolish to believe that the teacher's viewing a pedagogic encounter in means/ends terms to any extent *must* have such consequences. Again, there is no reason to assume that if a more potent pedagogy were found, the teacher-student relationship required by such pedagogy would have to be more destructive to the student than current practices already are

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1. Mario Bunge, *Scientific Research II: The Search for Truth* (Berlin: Springer-Verlag, 1967), p. 124.
2. Stephen Toulmin, *The Philosophy of Science* (New York: Harper Torchbooks, 1960), p. 111.
3. Ibid., p. 121-122.
4. Ibid., p. 122.
5. P. J. Guichelaar, Bernard Levy, N. M. Parikh, *Gear Manufacture and Performance* (American Society for Metals, 1974), p. 107.
6. Ibid.
7. Cardwell, op. cit., p. 53.
8. Ibid., pp. 53-54.
9. Michael Polanyi, *Personal Knowledge* (London: Routledge & Kegan Paul, 1958), pp. 49-50.
10. Bunge, op. cit., pp. 126-127.
11. J. H. van den Berg, *The Changing Nature of Man* (New York Delta Books, 1975), Chapter II.
12. Ibid., p. 27.
13. Thomas F. Green, *Activities of Teaching* (New York, McGraw-Hill, 1971), pp. 137-144.
14. Rudy Liveritte, "Educational Research and the Concepts of Teaching and Learning," *Studies in Philosophy and Education* IX (1976), 250.

RESPONSE TO SCHRAG

D. Bob Gowin
Cornell University

My first response to Schrag's paper was to wonder about his question, or his set of questions. He appears to ask: "Is progress in pedagogy possible? desirable? And his answer appears to be something like: "I can't find any evidence of progress, but it would be desirable if found."

My next response was to wonder just what the key terms "progress" and "pedagogy" meant to Schrag, and how he defined them. Progress appears to mean two things: 1. to do efficiently what we now do crudely 2. to invent new means of harnessing natural powers. And pedagogy appears to mean "the process of transmission" (of *what* is nowhere discussed).

So the question becomes "Is it possible to "transmit" or to engage in "transmission" more efficiently?" "Is it possible to invent new means of harnessing the natural powers of transmission?" Schrag can not seem to find any evidence that we are any better at "transmitting" today than we were in Socrates' time. And I see no evidence in the paper that modern technology has harnessed our natural powers of transmission. So, sadly, Schrag appears to desire a more potent pedagogy, but seems unable to find one.

Let me take up one at a time four cases Schrag would count as cases of progress if he could find positive evidence for them. *Case One.* "Are teachers today able to teach more in the same time interval than their ancestors?" No, claims Schrag. Well, what of this counter-example: Television teaching, in which more people, say 60 million, are all taught at the same time?

Case Two. "Can teachers today teach the same amount in less time?" No, claims Schrag. Yes, I claim. I can teach college Teaching Assistants how to teach more genetics in less time by the use of concept mapping techniques. I can show you before and after video tapes of teaching representing improvement.

Case Three. "Can we teach successfully students once believed unteachable? No, claims Schrag. Yes, I claim, depending on the meaning of "once believed unteachable" because it is clear to me that some men once believed women were not capable of being taught manly subjects like logic, mathematics and science.

Case Four. "Can we routinely convey understanding of subject matter once believed untransmissible?" No, claims Schrag. Yes, I claim, offering in evidence the television teaching of Einstein's theories to a large public audience.

Next, I want to probe a bit to some unattended assumptions. I asked myself: why should Schrag want to spend so much time dealing, not with pedagogy, but with science and technology? Why is it he does not give us any historical views of pedagogy, nor any facts, nor any concepts of modern education?

I have a 19th century feel about this paper and its assumptions. Schrag appears to agree with the positivists that science is the only form of valid, general knowledge about the world, that the technical application of science to the control of things is the only kind of utility that knowledge has, and in science and technology there appears to be uninterrupted and interminable progress in human affairs as well as in nature. Science and technology are his clear cases of progress. Does not every century witness the ever increasing scope of scientific knowledge and the ever enlarging domain of technology? Brave new world, indeed.

The catch for me is this: Schrag leaves out the social context of scientific knowledge. The meaning, for me, of progress is as a normative concept, not to be understood outside a social context.

Another unattended assumption may be seen by the contrast between the natural and the social. I believe Aristotle was correct in distinguishing between the natural and the conventional. The relevance here is that science assumes a uniform, invariant order in nature, often expressed as laws of causation. The more of these you find the more control and choice you have, a soft determinist position. But, pedagogy is social, and does not exhibit the underlying regularities of natural events. I believe there are artifactual regularities in pedagogy, but no natural ones.

Educating, through teaching, in my view, is a social event, requiring the cooperation between persons over materials of the curriculum. As such it takes place in a social setting, and the rules which govern such interactions are an inevitable ingredient in the process. Pedagogy is more than mere "transmission," more than a mere telephone line or radio broadcast. Even so, I'm surprised Schrag does not interest himself in the technology of information transmission, given his point of view. The word process technology today is fantastic, promising us laser printed books in six minutes, and much more.

But facts of any kind, modern or historical, are apparently unimportant to Schrag. So, I have to conclude that this is not an evaluation paper using facts and reasons to reach a value judgment concerning whether teaching is better today than in the time of our ancestors.

Another difficulty is distinguishing between progress in *knowledge* and progress in pedagogy.

On Socrates. Was he a good teacher? Could he teach more in less time? Could he teach those formerly thought unreachable? What about the socratic method: once invented, could it not be successfully used by scores and scores of teachers less gifted than Socrates? Would that count as progress?

What about Comenius, and the first book to contain pictures. If a picture is worth a thousand words, then is that not progress? Does any change in the curriculum material not count as change toward progress?

What about ideas? Have there been no important new ideas of educating since Socrates? What about Rousseau? And, of course, Dewey. Just exactly what did Progressive Education mean by progress? Is progress itself a progressive idea?

THE INDOCTRINATED STATE OF MIND

P. T. O'Leary
The University of Western Ontario

Even a casual examination of the literature on indoctrination reveals an amount of disagreement which is almost as extensive as the literature itself. To anyone familiar with philosophical inquiry such disagreement is neither surprising nor newsworthy. But as I. A. Snook notes, what is surprising about the literature on indoctrination is that within it "no clear distinction has been drawn between 'indoctrination' as an activity and 'indoctrinated' as a description of a person."[1] In other words, most of the work on indoctrination has been devoted to determining the appropriate logical analysis of the phrase "T is indoctrinating S" rather than the phrase "S is indoctrinated."

But how is "indoctrinated" to be characterized? In Snook's own account there appear to be three general conditions which conjointly are necessary and sufficient to claim that someone is indoctrinated. These are: (1) the belief condition–the indoctrinated person believes a proposition or set of propositions; (2) the epistemic condition–the indoctrinated person believes a proposition or set of propositions "regardless of the evidence"; (3) the causal condition–the belief condition and the epistemic condition have been brought about because of certain teaching activities.

In what follows I want to examine Snook's belief and epistemic conditions, since together they describe the all important "state of mind" of any indoctrinated person. In this paper I shall reformulate the belief condition, and, although retaining the epistemic condition, I shall urge the addition of a dispositional condition. I shall not, however, consider various problems associated with the causal condition.

Coming to a satisfactory description of the indoctrinated state of mind seems to me to be important since such a description can act as one basis for assessing various educational practices and consequences. In the latter part of the paper, given my reformulation of the indoctrinated state of mind I shall consider the sort of argument which would, if brought forward, be sufficient to establish that being indoctrinated is an educationally undesireable state to be in.

Although I shall launch my inquiry into what constitutes a satisfactory description of the indoctrinated state of mind by ways of considering Snook's phrase "believing p regardless of the evidence,"[2] what I have to say by way of criticism is by no means limited to Snook. Even though the literature on indoctrination does not, as far as I can determine, explicitly discuss and distinguish the indoctrinated state of mind from indoctrination as a specific type of teaching action, much of this literature shares with Snook an acceptance of both the belief and epistemic conditions. Since I am more concerned with these conditions rather than with any particular version of them, what I have to say by way of criticism and emendation is applicable to a significant portion of the indoctrination literature as well as to Snook.

THE BELIEF CONDITION

Consider the relation between believing a proposition and doubting it. If S doubts that p, then it is not the case that he believes it. Given the view that belief is one of the necessary conditions of being indoctrinated, if it can be shown that a student doubts a given proposition rather than believing it, then we would have to deny that the student is indoctrinated. Yet being indoctrinated with respect to a given proposition seems quite compatible with doubting it so that if a student does come to doubt a proposition regardless of the evidence, he or she is just as much a candidate for being regarded as indoctrinated as the one who believes that very same proposition regardless of the evidence.

But perhaps the belief condition could be defended by claiming that statements of the form "S doubts that p" can be regarded as equivalent to belief statements of the form "S believes that p is doubtful,"[3] thus allowing belief to retain its status as the logically fundamental state of mind required of one who is indoctrinated. But this tactic will not succeed since to believe that a proposition is doubtful is to believe that it ought to be doubted, but not necessarily to doubt it. The gap between "doubtful," and "doubt" is as wide as that between "desirable" and "desire."

It appears then, that being in a state of belief is not by itself a necessary characteristic of the indoctrinated person, and a reformulation of the indoctrinated student's state of mind is required. A more accurate formulation would take belief and doubt as disjunctively necessary so that if a student neither believes p regardless of the evidence nor doubts p regardless of the evidence, this would be sufficient to deny that the student has been indoctrinated.

THE EPISTEMIC CONDITION

Snook claims that while the term "indoctrination" may have some neutral usages, this is not the case with "indoctrinated" which, Snook says, "is clearly pejorative." What carries the burden of this pejorative characterization is the epistemic condition, for according to Snook, to call someone "indoctrinated is to criticize the manner in which he holds his beliefs."[4]

In Snook's own description of the epistemic condition, the phrase "regardless of the evidence" contains the relevant criticism. Yet the precise object of this criticism is obscured since the phrase "regardless of the evidence" is susceptible to two different interpretations. For a person may believe or doubt a proposition by either (1) believing or doubting without evidence, or (2) believing or doubting despite the evidence. Complications do not end here however, for these two interpretations are themselves, like loaves and fishes, capable of multiplication. Consider the following:

(1) S believes or doubts that p without evidence
    (a) S believes or doubts that p for no reasons at all
    (b) S believes or doubts that p for certain reasons although there are no good reasons for believing or doubting that P
(2) S believes or doubts that p despite the evidence
    (a) There are good reasons for doubting what S believes and believing what S doubts
    (b) S believes or doubts that p for bad reasons although there are good reasons for believing or doubting that p.

Despite these variations on an epistemic theme, one of my objections to Snook's epistemic condition is not over its elasticity but rather over whether it, in conjunction with all the other conditions mentioned by him, is sufficient as an analysis of "indoctrinated." Suppose for example, some student, under the influence of a teacher, comes to believe that the earth is flat. He believes this regardless of the evidence in the sense that although he has reasons bountifully supplied by his teacher, there are no good reasons for such a belief. This case would satisfy all Snook's conditions but I think it would be prefereable to call such a student ignorant about the shape of the earth, rather than as indoctrinated. Even if the proposition believed by the student is true and yet perhaps because of the teacher's negligence the student has no reasons at all for his belief, he could still be described as ignorant, but not of the state of affairs represented by the proposition he believes but of the state of the evidence. In short, each of the interpretations of "regardless of the evidence" when combined with Snook's other conditions, fails to distinguish the ignorant person from the one who is indoctrinated. Clearly, something more has to be added.

A second objection to Snook's treatment of the epistemic condition arises in connection with the extent to which the pejorative character of "indoctrinated" is carried by this condition. For although one interpretation of the phrase "regardless of the evidence" does not carry an evaluative term (i.e., 1a), those interpretations which do (i.e., 1b, 2a and 2b) evaluate the kind of reasons a person has for his or her beliefs but not the state of mind which is described as "indoctrinated." So far as things stand now it is an open question as to whether believing or doubting regardless of the evidence is an undesirable state to be in.

Although in what follows I shall be adding a dispositional condition to Snook's epistemic condition as well as to my reformulation of the belief condition, I will not try to account for the pejorative use of the term "indoctrinated" by granting such an adverse assessment definitional weight. In other words, the definiens I offer of the indoctrinated state of mind will still leave the evaluation of such a state an open question. Doing this does not preclude the pejorative use of "indoctrinated" but treats it as logically analogous to terms like "liar" and "bourgeois" which are often used pejoratively but whose definitions do not include nor require evaluative terms in their definiens. In this respect, "indoctrinated" is logically unlike such terms as "cruel," "maladjusted," "lazy," etc. The only evaluative terms I shall use are those entailed by the phrase "regardless of the evidence."

While I have no objections to using terms which entail assessments of various states of mind or character, it seems that in the case of "indoctrinated" the effect of making an adverse assessment a part of its definiens might be to misdirect important educational inquiries into indoctrination. But how might this "misdirection" occur? Suppose for a moment we consider the term "cruel" as applied to some action and, once it is agreed that the given action is indeed cruel, ask how evaluative inquiries might then proceed. Once agreement that a certain action is cruel is secured, then the question of whether the action was a good one is closed, for the term "cruel" carries with it an adverse assessment of the action so described. However, the question of whether there are excusing circumstances which permit the doing of something which is acknowledged to be wrong, is still open. If one of the defining conditions of "indoctrinated" logically requires an adverse assesssment of that state of mind, we find that our evaluative inquiries into indoctrination have a similar feature; that is, evaluative inquiries into the justification of indoctrination turn out to be nothing more than attempts to determine whether there are any excusing circumstances. I consider this to be a misdirected inquiry into the educational desirability of the indoctrinated state, not because there cannot be excusing circumstances, but because the more fundamental issue of whether a given state of mind is a good one to be in, can be circumvented. A more neutral description of the indoctrinated state may prevent us from avoiding direct discussion of the educational desirability of such a state.

A REFORMULATION: THE DISPOSITIONAL CONDITION

In this section I want to present a description of the indoctrinated state of mind which is neutral as to the desirability of such a state. I shall then interpret this formulation in the light of certain questions which might be raised. Finally in the next section I shall consider one type of argument which could show that being in an indoctrinated state of mind is educationally undesirable.

My suggestion for a description of the indoctrinated state of mind would be as follows:

> "S believes that p or doubts that p regardless of the evidence and is disposed to reject any q which is offered as a counter-instance to believing that p or doubting that p"[5]

1. *To what extent is this formulation neutral?* This formulation is not entirely neutral in so far as the phrase "regardless of the evidence" can often be interpreted as entailing some evaluation of the kind of reasons for believing or doubting something. But as we have already seen this does not entail any assessment of the state of mind so described. Nor does the addition of the dispositional condition entail any such assessment. Moreover, the dispositional condition does not even require evaluation of the sort of reasons which are offered as counter-instances and is logically independent of the epistemic condition. In some cases the disposition to reject counter-instances is not independent of epistemic conditions since a person may believe what is analytically true for relevant reasons. However, in the case of the indoctrinated state of mind even if a person believes something which is analytically true, since he believes it non-evidentially the disposition to reject counter-instances does nor arise in connection with his or her epistemic state, thus allowing us to regard the dispositional condition as logically independent of the epistemic condition.

2. *Is the formulation redundant?* One might argue however that redundancy does in fact occur because the disposition to reject anything offered as a counter-instance is logically entailed merely by the fact that someone believes or doubts a given proposition. Believing or doubting a proposition cannot occur unless the agent also believes that there is no sufficient reason to doubt what is believed or to believe what is doubted. Being disposed to reject offered counter-instances is identical with believing that there are no counter-instances requiring us to exchange belief for doubt or doubt for belief. Consequently, the disposition cited in the formulation is not, as we have supposed, logically independent of the belief condition of the indoctrinated state of mind and thus gives us no additional criterion.

There are important and interesting questions which the above argument raises about the logic of belief and doubt. In rejecting the redundancy charge, however, we need not enter these thick woods but can skirt the edge by pointing out that the preceding argument is based upon an incorrect interpretation of the disposition to reject whatever is offered as a counter-instance. For the formulation is not claiming that *while* someone believes or doubts that p, they simultaneously believe that there *are* no reasons sufficient to change their epistemic attitudes towards a given proposition. Rather the claim is, that in being disposed to reject anything which is offered as a counter-instance, the indoctrinated person believes that there *can* be no reasons which *would* be sufficient to change their current epistemic attitudes. There is no redundancy in the formulation since this latter interpretation is not required by the logic of belief and doubt and represents a logically independent condition. For believing or doubting something is compatible with believing that one *may be* mistaken, although it is not compatible with believing that one *is* mistaken.

3. *Is this formulation the only one which is neutral?* There are at least two writers on indoctrination who, though primarily concerned with indoctrination as a teaching activity rather than as a state of mind, have analyzed indoctrination in a way which makes it possible to describe the indoctrinated state of mind in terms which are evaluatively neutral. Consider for example, John White's claim that indoctrinating "someone is trying to get him to believe that a proposition 'p' is true, in such a way that nothing will shake that belief."[16] In this case an indoctrinated person would be one who believes that p unshakably. Since such a description does not entail any assessment of that state of mind it effectively meets the neutrality condition. This condition is also met by R.M. Hare's analysis of indoctrination since on his account indoctrinated persons would lack the "capacity to think for themselves."[17] Since this incapacity is not described in terms of incompetence but rather as an inability to raise questions about one's way of life, this allows us to view such a state of mind in entirely neutral terms.

Is there any reason to prefer my description of the indoctrinated state of mind to its neutral competitors? Obviously there are differences. One of them (viz. the description of the belief condition) I have already considered by suggesting that we treat belief and doubt as disjunctively necessary to the indoctrinated state of mind. Another difference (viz. the absence in Hare's account of the belief condition) would require a lengthy inquiry into the appropriateness of claiming that moral principles can be objects of belief. For the sake of economy then, I shall concentrate on what I take to be the one major weakness in both White's and Hare's account of the indoctrinated state of mind; viz., that their requirements are too strong.

In these two accounts an indoctrinated person is one who is not able to change his or her condition. In White's view, to believe unshakably is to believe in such a manner "that nothing will shake that belief." Taken literally, this means that someone who is indoctrinated cannot emerge from being in an indoctrinated state since nothing *will* shake his current belief. Similarly with Hare, the inability to think is connected with *never* being able to raise questions about one's way of life. But if we are to allow that persons can escape from their indoctrinated condition, then the description we give to the indoctrinated state of mind must not erect a logical barrier to such a change. The advantage of my dispositional account is that it allows for such a possibility.

4. *Why is the last condition formulated in terms of a disposition and not in terms of a belief?* While it may be logically permissible to translate dispositions into equivalent beliefs, in the case of indoctrination it seems less than desirable to do so. Suppose some person (call him Wilberforce) believes that Jesus raised Lazarus from the dead. When challenged by an opponent (call him Huxley), Wilberforce refuses to believe that he believes that there *can* be no reason which would be sufficient to overthrow his belief that Jesus raised Lazarus from the dead. Indeed he believes he believes that it is possible for him to be mistaken, but it so happens that in this case he is not. Huxley, however, being a shrewd observer of human behavior notices that whenever Wilberforce's belief in the resurrection of Lazarus is challenged, Wilberforce almost inevitably relies upon clever but none the less stock, well-rehearsed responses. It is this sort of behavior which leads Huxley to conclude that no reason for doubting the miracle story would be regarded by Wilberforce as sufficient for bringing about a change in his belief.

A person can fail to recognize that he or she has a particular belief, and as far as indoctrination is concerned, this failure might be especially prominent. Formulating the last condition of the indoctrinated state of mind in terms of dispositions has, I think, the advantage of indicating a common ground upon which both agent and observer can determine the presence or absence of a condition relevant to assessing whether a given agent is indoctrinated. Otherwise, it might be suggested that the sole determination of whether a given person believes or doubts something is a matter of introspection, in which case the agent may be said to have a privileged access to his epistemic states. This would have the unfortunate effect of making the agent's denials of his epistemic states sufficient ground for rebutting the claim that he is indoctrinated.

Of course, what has been said here can likewise be said of the belief condition of the indoctrinated state. Why not also treat this condition dispositionally? My reluctance to do so, however, stems from some reservations as to whether *all* beliefs can be rendered dispositionally. Moreover, in cases which pertain to the first condition, recognition of what one believes is less crucial to describing someone as indoctrinated and thus may involve less self-deception. The identification of those beliefs and doubts which are not part of the last condition of "indoctrinated" occur when one is forced by circumstances into inquiry concerning the truth or falsity of certain claims.

INDOCTRINATION AND MISEDUCATION

How would one begin to evaluate the educational desirability of being in an indoctrinated state of mind when the latter is described in accordance with my formulation? Perhaps we could begin looking at this problem by citing a passage from Gilbert Ryle's *The Concept of Mind*:

> Children, semi-literates, old fashioned soldiers and some pedagogues tend to suppose that being taught and trained consist in becoming able merely to echo the exact lessons taught. But this is an error. We should not say that the child had done more than begin to learn his multiplication-tables if all he could do were to go through them correctly from beginning to end. He has not learned them properly unless he can promptly give them the right answer to any snap multiplication problem (lower than 12 x 13), and unless he can apply his tables by telling us, e.g., how many toes there are in a room in which there are six people. Nor is a man a trained rock-climber who can cope only with the same nursery climbs over which he was taught, in conditions just like those in which he was taught, and then only by going through the very motions which he had been then made to perform. Learning is becoming capable of doing some correct or suitable thing in any situations of certain general sorts. It is becoming prepared for *variable* calls within certain ranges.[8]

What seems to me to make Ryle's comment applicable to the indoctrinated state of mind is that while a student is in such a state he or she is not "prepared for *variable* calls within certain ranges." Suppose for example, we are teaching someone to drive and in order to make sure that our student does not exceed speed limits, we successfully get him to believe automobiles cannot travel over the speed limit. Indeed, the student is so persuaded that he is disposed to reject any reason which is offered to get him to change his belief. Thus he is in a state appropriate to the indoctrinated state of mind. To the extent that that belief regulates the student's driving behavior, and while it is held in a manner appropriate to being indoctrinated, it seems very unlikely that this driver would respond to novel circumstances which others might regard as justifying exceeding the speed limit (e.g., getting someone to the hospital). While the teacher in producing a certain mode of belief may have succeeded in bringing about certain driving habits, he has not prepared the student for variations which may legitimately occur within the activity of driving.

Ryle's notion of preparing students for "*variable* calls within certain ranges" suggests one important type of argument against the desirability of being in an indoctrinated state. Whether being in a state of mind appropriate to indoctrination is educationally undesirable, depends upon (1) whether knowing how to engage in a given activity is thought desirable, and (2) whether we construe the activity which students are being taught as subject to variation. Consider the first condition. Where it is believed that being able to engage in a given activity is undesirable, then the appropriate teaching strategy is not indoctrination, *vis á vis* that activity, but refusal to teach it at all. But suppose that knowing how to engage in a given activity is regarded as desirable, but that the beliefs, skills, and dispositions required for its performance are perfectly suited to all circumstances and not subject to alteration. If we *knew* that a given activity would require no modifications in belief in order to perform it with a minimum degree of competence, then there would be no educational objection to bringing about that state of mind which is characteristic of being indoctrinated.

Objections to the educational desirability of being indoctrinated arise in connection with desirable activities whose competent conduct requires that we allow for the possibility of variation within the activity by way of modification of relevant beliefs. What is objectionable about the indoctrinated state of mind is that bringing it about, whether deliberately or through negligence, "blocks the road," to borrow a phrase from C.S. Peirce. Being in such a state, not only blocks the road to inquiry about certain beliefs, but also the road to the acquisition of competency within the exercise of important activities where variation in attendant circumstances is possible.

It should perhaps be noted that the objections I have said can be raised against the indoctrinated state of mind are not directly, at least, of a moral sort. Moral reasons are of course not precluded and indeed may be one kind of consideration which might be given for claiming that it is desirable that certain activities be learned by students. Nevertheless the sort of objections I have raised have focused upon regarding being indoctrinated as a result of miseducation; that is, given the sort of state of mind it is, being indoctrinated is incompatible with achieving competency in the conduct of those valuable activities where there are "variable calls within certain ranges."

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1. I.A. Snook, "Indoctrination and the Indoctrinated Society", *Studies in Philosophy and Education* 8, 1 (summer, 1973), pp. 55.

2. See also I.A. Snook, *Indoctrination and Education* (London and Boston: Routledge & Kegan Paul, 1972), p. 47.

3. This example was suggested to me by my colleague John McPeck.

4. Snook, "Indoctrination and the Indoctrinated Society," ibid, p. 55.

5. This reformulation owes a great deal to discussions I have had with my ex-colleague, Michael McCarthy.

6. J.P. White, "Indoctrination," in *The Concept of Education*, ed. R.S. Peters (London: Routledge & Kegan Pual, 1967), p. 181.

7. R.M. Hare, "Adolescents into Adults" in *Aims of Education*, ed. T.H.B. Hollins (Manchester: Manchester University Press, 1964), p. 52.

8. Gilbert Ryle, *The Concept of Mind* (London: Hutchinson & Co., 1949), pp. 146-147.

SOME DIFFERENCES BETWEEN PSYCHOLOGICAL AND EDUCATIONAL THEORIES

Kieran Egan
Simon Fraser University

INTRODUCTION

The study of education seems to be in the odd position of using theories designed to study phenomena other than those of most concern to its practical interests. At present the field of education seems to be dominated by psychological theories. Most educational research seems to be guided by psychological theories, and a significant proportion of all writing about education is concerned with drawing implications from psychological theories for educational practice. Education seems defenseless against these incursions. An effective defense might be presented by educational theories, but we seem not only to lack such theories, but to lack even a clear sense of what such theories might be like.

In this paper I aim to work towards clarifying the nature of educational theories by contrasting what we want such theories to tell us with the kinds of things psychological theories in fact tell us. I will use Piaget's theory of cognitive development as an example of a psychological theory, because it is commonly assumed to have many clear implications for educational practice, and because it has at present enormous influence within the field of education.

I.

One of Piaget's great contributions to our understanding of human development has been to show that cognitive development involves passing through stages during each of which cognitive functioning is qualitatively different. The typical child's thinking is not a simple microform of the typical adult's, requiring expansion only in terms of knowledge and experience. He has shown, rather, that children's logics are different from adults', and the final stage of the process is achieved only after going through a series of qualitatively different prerequisite stages in an unvarying sequence.

These psychological discoveries have served to emphasize for educators that *what* we teach and *how* we teach it need to be influenced by individual students' stage of development-by *when*. This is not an insight that should appear novel to educators, of course. Plato outlines a four stage process of educational development—from *eikasia* to *pistis* to *dianoia* to *noesis* which spans a sequence from concrete, perception-dominated thinking to refined abstract thinking. But Piaget has made the point in a modern context, and his psychological theory spells out the process in enormous detail for some parts of its course, and it claims considerable empirical support.

Piaget's stages—sensorimotor, preoperational, concrete operational, formal operational, or some variant—are commonly accepted as having significant educational implications. Piaget's are not, of course, stages of educational development. His focus is on a particular strand in the wide and complex thread of human development, and within the thread of cognitive development he focuses on and highlights restricted parts. As Flavell and Wohlwill put it, Piaget has been, properly, highly selective with regard to the phenomena he has focused on, and

> we should not be at all surprised to find some future theorist making an excellent case for the simply momentous cognitive changes that take place, say during the three-to five-year-old span... Developmentalists would then say that some very important things happen between three and five and that some other things, quite different, but equally important, happen between five and seven.[1]

One function of a theory is to focus our attention on a particular range of phenomena. The danger for educators in letting Piaget's theory focus our attention on the developmental process is that it will focus attention on phenomena of prime interest to the cognitive psychologist but of possibly only peripheral interest to the educator, and it will focus attention away from the phenomena of most direct interest and value to the educator. If we might expect to see quite different things when focusing on different aspects of the cognitive developmental strand, we might expect the strand of educational development to have even more distinct characteristics, highlights, stage divisions, and so on.

Given the influence developmental stage has over *what* and *how* learning can best take place, we may expect an educational theory to be developmental in form; it will characterize the qualitatively different stages that are prerequisite to the achievement of its educational goals.

II

Psychology and education share an interest in things like learning, motivation, development and so on. The use of the same words often bewitches us into thinking that we share an interest in the same aspects of these things—that a psychological learning theory or theory of motivation or development is about the things that educators are interested in.

In psychology, appropriately, attempts are made to isolate and explain a range of phenomena which may be called motivation, or learning, or development. Educators are properly not so much interested in isolating motivation or development or learning, but rather their focus is primarily on a level of interactions among such things.

Thus education is not properly concerned with isolating and explaining, for example, motivation, but rather with how one engages children's interest in learning particular things of value. Importing the term "motivation" into education, while it may have more technical *éclat* than, say, "a study of children's changing interests," is mischievous. It is mischievous not just because it converts what is an appropriate technical language in psychology into educational jargon, but because it shifts educators' attention away from the interactive process among children's interests, ages, and subject matter and towards trying to spin tenuous connections from ideas about "need reduction" or "extinction of orienting reflexes" to the behavior of groups of children sitting in classrooms. If we borrow psychology's theories we borrow also its focus of interest, and lose our own.

Piaget's focus on development, especially for school-age children, is largely on a limited set of logico-mathematical forms. These are hardly the only, or even most important, pieces of mental equipment children bring to making sense of the world and their experience. It is commonly claimed that his theory tells us about necessary constraints on what kinds of things children can learn at different stages of their development. But, even if this were true, it would tell us only about a small range of restrictions, and nothing positive about how best to engage children's interest at particular stages of their educational development. By using Piaget's theory in education, we find our attention disproportionately directed on a set of logico-mathematical constraints and away from that level at which learning, content, students' interests, development, and so on, are inextricably mixed. Given this level of interest, we may reasonably expect an educational theory not to be divided up into, nor be constituted of, sub-theories of learning, motivation, development, or whatever.

An educational theory, then, will tell us what things of value to teach to people at each stage of their educational development, and will tell us how to teach those things so that they are most engaging and meaningful at each stage.

III.

The goal of education is not a kind of thinking or a body of knowledge, but rather a kind of person. It is a kind of person who will be in part composed of knowledge and thinking skills, along with a commitment to continue developing both. The process of psychological development may lead to certain thinking skills, like Piaget's formal operations, which may serve in a relatively innocent way as a terminus to the process. In education, however, the goal is a kind of person with certain characteristics, and this product serves as a *justification* for the process. We want to know what kind of person will be produced if we teach particular things, in particular ways, at particular times. A theory which outlines in detail the methods of teaching , the concepts, skills, and knowledge that will best lead towards the production of a Spartan warrior may be of little use to a typical small-town elementary school teacher. So the explicit specification of the goal is a necessary part of an educational theory.

It seems to follow that an educational theory must be culture-bound, in a manner against which psychological theories try to defend themslves. We will not seek to follow psychology's efforts to reduce the value-laden aspects of its theories. A value-free educational theory would be useless. We want to know how to produce a preferred kind of person; that is, we want to know what value decisions we should make at every step of the way. We want to know *what* we should teach in order to produce a person capable of enjoying and improving western decmocratic social life and its culture (or some alternative), *how* we should teach those things to best encourage the development of such a person, and *when* it is best to teach those things in those ways. The design of a curriculum to produce a particular kind of educated person requires answering these questions, and it is a value-saturated and culture-bound task.

So an element of an educational theory will be an explicit characterization of the desired end-product of the educational process. In explicitly describing the desired end-product, the theory must take into account the fact that humans are social and political as well as intellectual animals; that to specify a desirable educated person is to specify, implicitly or explicitly, a desirable political, social, and cultural context within which a particular set of desirable human potentials are actualized.

IV.

Psychologists are engaged in the scientific task of describing what of necessity happens—in discovering laws of our *psyche.* Piaget's theory seeks to describe precisely what of necessity happens in human cognitive development. Piaget and his co-workers seek to show by cross-cultural studies the universal applicability of his theory. Such studies may force revision of the theory, and such revisions are always in the direction of making the theory more generally aplicable. Educators are interested in what ought to be done to produce a particular kind of person. Psychological theories seek to describe constraints of our nature; educational theories seek to prescribe what ought to be done within the constraints of what is possibie for people. Piaget, it is commonly assumed in education, has shown that there are certain clear constraints on what children can learn at any particular stage of their development before maturity. His descriptions of these constraints are commonly accepted as the major implications his theory has for education.

Crucial here is the question—what does Piaget's theory describe? And this question brings us to the fundamental difficulty in the human sciences' ambition to generate knowledge of a security equivalent to that of the natural sciences. The inconvenience of the human *psyche* for psychology's ambition to be scientific after the fashion of the natural sciences is that it assimilates into its essence the history of the culture to which it accommodates. The history of a stone is irrelevant to the physicist's ability to describe the laws by which it behaves, but the history of an individual *psyche*—its personal history or experience and that of the cultural group which shapes it—is a profound determinant of behavior.

If Piaget is indeed describing constraints of our nature on the development of certain forms of cognition, we would have to acknowledge that there may be some limited lessons the educator should draw from his theory. But one of the current fascinations of the theory is the degree to which it is culture-bound; the degree to which it is describing a state of affairs determined by the typical forms of social and educational initiation children go through. The importance of the dubious status of Piaget's theory for education is given point by the following quotation from the introduction to a conference report on school mathematics:

> It has been argued by Piaget and others that certain ideas and degrees of abstraction cannot be learned until certain ages. We regard this question as open, partly because there are cognitive psychologists on both sides of it, and partly because the investigations of Piaget, taken at face value, do not justify any conclusion relevant to our task. The point is that Piaget is not a teacher but an observer—he has tried to find out what it is that children understand, at a given age, when they have been taught in conventional ways. The essence of our enterprise is to alter the data which have formed, so far, the basis of his research. If teaching furnishes experiences which few children now have, then in the future such observers as Piaget may observe quite different things. We therefore believe no predictions, either positive or negative, are justified, and the only way to find out when and how various things can be taught is to try various ways of teaching.[2]

If Piaget is describing a process determined by past social and educational contingencies, the inference that educators must conform with the process he describes leads to institutionalizing certain developmental norms determined by past socializing and educational practices. That is, to accept Piaget's psychological theory as describing constraints to which an educational theory must conform is to reinforce a process appropriate to past conditions.

While there is insufficient space here for detailed exegesis of recent empirical testing of Piaget's theory it should be noted that cross-cultural studies fail to support his claims to be describing a universal, natural process;[3] that the theory's predictions about learning, and particularly the stage-dependant restrictions on what can be learned, are largely unsupported;[4] that the precise and orderly progression of sub-stages is becoming somewhat unravelled;[5] and that his distinction between development and learning seems increasingly insecure.[6] That is, whatever mixture of culture and nature is being described by Piaget's theory—even allowing that what seems to remain of a description of constraints of nature ultimately reduces to a description of logical, not psychological, constraints on the development of understanding—we may at present feel confidence in prescribing educational programs that do not conform in detail with Piaget's psychological theory.

This may seem a foolhardy way of putting it. That there are constraints of nature on human cognitive development seems fairly clear. There are also some fairly obvious logical constraints in the way certain subjects can be presented. We can accept as a generally true psycholgocial constraint the move from concrete, perception-dominated thinking to abstract, formal thinking. But such a developmental continuum was clear to Plato, and apparently to the Egyptians before him.[7] This common observation of educational importance hardly needs to be derived from an elaborate theory. The greater precision the theory supposedly offers to education is psychologically fascinating but, at present, educationally uninteresting. For Piaget's theory to properly influence education we would need to know not only what is the case, but what is necessarily the case, and why. Converting psychology's *is* into an educational *ought*, especially when what is described is not a constraint of nature, is both logically illegitimate and educationally destructive. The conclusion may be put in the form of a syllogism with quite radical implications for present educational thinking:

P1. Psychological theories have implications for educational practice only to the degree that they describe constraints of nature;

P2. No psychological theory at present securely describes a constraint of nature in those general and significant aspects of the *psyche* which are of interest to education;

C. Psychological theories at present have no implications for educational practice.

An educational theory, then, should probably include a concrete-abstract continuum, but otherwise feel a certain confidence in human plasticity and a consequent freedom to prescribe what seems logically prerequisite to the achievement of the desired end-product.

V.

An educational theory may prescribe a process which no one has yet gone through. Indeed, the characterization of new ideals and of practical steps towards achieving them is a prime aim of the educational enterprise. If no-one has yet gone through the process prescribed by the theory, it makes the question "What is its empirical basis?" rather complicated to answer. Such a question may initially mean: "Is there evidence suggesting that what the theory recommends involves things which are impossible?"

A "theory" offered in psychology without a substantial empirical base would be considered mere speculation. Should we, then, talk of educational speculations, rather than educational theories? We might note first that informed speculation, even in the natural sciences, may perform an important programmatic function. And, it is not entirely irrelevant to add, in education the program is the point. Also, of course, the line between theory and speculation is not as clear as the words' usual positive and negative associations suggest.

Minimal requirements so far suggested for an educational theory are that it provide an explicit characterization of its ideal product and that this product be a recognizable kind of person, and that it tells us what things we should teach, how and when, in order to produce a person of this kind. So our educational theory will make at least one empirical claim: if you teach these things in this order in these ways then you will produce a person with these characteristics.

How can we test such a claim? Well, we might try the program and see what happens. This is not, of course, altogether satisfactory. Given the human diversity apparent to casual observation, it may be that the ideal is accessible to only a small proportion of people and many people can be expected to achieve only some fraction of the ideal set of characteristics. Apart from specifying an ideal, then, we may expect our educational theory to specify educational goals which may be gained by people who have diverse capacities but who will not fully achieve the ideal. How does such a reasonable expectation affect our ability to test the single empirical claim we want our educational theory to make? Given the complexity of human beings, and the degree of inter-individual variety, we may expect the general empirical test of the theory, which would involve implementing the program, to provide inconclusive results.

We may expect an educational theory to make many smaller scale empirical claims. Testing these may either add to or reduce our sense of the plausibility of the theory's major empirical claim, but such smaller tests will rarely be adequate to undermine the general claim. Indeed an educational theory may systematically erradicate smaller scale empirical claims, and propose a program whose justification at every step is tied to the end-product. For example, if the theory claims that young people should learn by active discovery methods, empirical tests which show this to be a very inefficient method compared with what happens when traditional instruction is used need have no effect on the theory's plausibility. Its proponents may say that learning by active discovery is not recommended on the grounds of efficiency in mastering quantities of content, but is justified in terms of the character of the end-product which will result if such methods are used.

A theory which makes only one empirical claim of such generality that its falsification is enormously difficult is still, of course, open to conceptual tests—of consistency, coherence, plausibility, and so on. Such conceptual testing, we may expect, will provide the major means for deciding which theories' programs are worthwhile implementing. The point, however, is that such a theory, if we desire its promised end-product and think it offers a plausible way of bringing it about, is educationally useful. Indeed, such a theory tells us ex-

exactly the kinds of things we need to know in education. The character of theories in physics, psychology, and education may reasonably reflect the different functions they perform in these different areas and reflect differences in the phenomena they tell us something about. Educational theories may involve a greater degree of speculation than one would expect in psychology and they may not *explain* anything—unless one wants to speak very loosely about explaining how to produce a particular kind of person. We may accept that they need to be formally falsifiable—we would want to rule out tautologous programs, which claim success if a particular procedure is followed regardless of its results—but we may acknowledge that empirically falsifying the most general claim of such a theory may be practically impossible.

An educational theory, then, must make at least one formally falsifiable empirical claim; it must distinguish the product of its program from the process—making the latter causally responsible for the former, and making the former justify the latter.

Conclusion

Psychology has generated much knowledge that is properly of interest to educators. Knowledge by itself is dumb; it is made articulate by being organized into a theory. A theory is a kind of syntax; as the latter organizes morphemes into meaningful sentences, so the former organizes knowledge into more general meaningful claims. Knowledge about the *psyche,* about learning, development, motivation, or whatever, is psychologically articulated when organized by a psychological theory. The same knowledge may become educationally articulate only by being organized within an educational theory. This is not, I think, a trivial point. It means that apart from an educational theory no knowledge and no theory has educational implications.

This suggests also that every consideration relating to education—whether the organization of furniture in the classroom or matters of local policy-making, as far as these are educational rather than socializing matters—must be derived from our educational theory. That is, there can be no such thing as lower-level theories in education—whether of classroom design or learning or motivation or whatever—but only general, comprehensive educational theories with either implications for things like classroom design or direct claims about such things or about learning, motivation and so on.

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1. J.H. Flavell and J.F. Wohlwill, "Formal and Functional Aspects of Cognitive Development," in *Studies in Cognitive Development: Essays in Honor of Jean Piaget,* eds. D. Elkind and J.H. Flavell (Toronto: Oxford University Press, 1969), pp. 81-82.

2. Introduction to Goals for School Mathematics, report of the Cambridge (Mass.) Conference on School Mathematics quoted in Jeremy Kilpatrick, "Cognitive Theory and the SMSE Program," in *Piaget Rediscovered,* eds. Richard E. Ripple and Verne N. Rockcastle (Ithaca, N.Y.: School of Education, Cornell University, 1964), pp. 129-130.

3. See Patricia Teague Ashton, "Cross-cultural Piagetian Reserach: An Experimental Perspective," *Harvard Educational Review* 45, 4 (November, 1975), pp. 475-506.

4. See Charles J. Brainerd, "Learning Research and Piagetian Theory", in *Alternatives to Piaget: Critical Essays on the Theory*, eds. L.S. Siegel and Charles J. Brainerd, (New York: Academic Press, 1978); Charles J. Brainerd, "NeoPiagetian Training Experiments Revisited: Is There Any Support for the Cognitive-developmental Stage Hypothesis?" *Cognition* 2 (1973), pp. 349-70; and Margaret Donaldson, *Children's Minds* (London: Croom Helm, 1978).

5. See J.G. Wallace, "The Course of Cognitive Growth," in *Piaget, Psychology and Education*, eds. Ved P. Varna and Phillip Williamson (London: Hodder and Stoughtton, 1976).

6. See Kieran Egan, *Education and Psychology, Plato and Piaget*, (forthcoming.)

7. Plato, *The Republic*, VII 536.

RESPONSE TO EGAN

Barbara Houston
University of Western Ontario

Kieran Egan assigns himself two important tasks in his paper and he proceeds boldly and imaginatively with both of them. Although I am in agreement with Egan on a number of points, my discussion will focus on certain confusions I find in his paper and on our disagreements in the hope that cultivation of our disagreements may serve as a catalyst to better thought on the very important issues he raises.

The two tasks which Egan undertakes in his paper are: (1) a critical appraisal of the role of psychological theories in the study of education and (2) a clarification of the nature of educational theories through the development of a set of minimum requirements which any adequate educational theory must satisfy. It is by contrasting "what educators want a theory to tell them" with "what psychological theories do in fact tell them"[1] that Egan accomplishes his two tasks. He illustrates the defects he thinks are shared by all psychological theories by commenting on Piaget's theory of cognitive development—understandably since this theory has been enormously influential in education.

In his paper, Egan argues for two major conclusions. The first conclusion, which I shall call the negative thesis, is the claim that at present psychological theories have no implications for educational practice. The second conclusion, which I shall call the positive thesis, describes a set of minimum requirements which any adequate educational theory must satisfy.

I shall discuss first the negative thesis and then Egan's positive claims about the nature of educational theories. I shall argue in the first instance that given the usual senses attached to key phrases Egan's negative thesis is false, but more importantly, that this thesis is supported by argumentation that is unsound and in a curious way self-defeating. I shall further argue that Egan's positive thesis constitutes a mistaken description of the nature of educational theories and a dangerous prescription for their construction. The central question around which my discussion is built is one that links two parts of his paper and is I think one of the most interesting questions to explore: Are educational theories refutable? The exploration of this question will help us determine more precisely the nature of educational theories.

Consideration of the Negative Thesis: Psychological Theories at Present Have No Implications for Educational Practice

Egan displays his argument for the strong negative thesis in what he calls syllogistic form.[2]

(1) Psychological theories have implications for educational practice only to the degree that they describe constraints of nature;

(2) No psychological theory at present describes constraints of nature;

(3) Therefore, psychological theories at present have no implications for educational practice.

Taking this argument at face value there are two immediate and specific criticisms to be made. First, the initial premise is false. Egan provides no discernible justification for it and it seems obvious that psychological theories do not have to describe constraints of nature to be interesting and helpful to educators. To say that constraints described by a psychological theory are dependent upon past socializing and educational practices does not necessarily diminish their importance. The significance of the information will be determined in large part by the alterability of these conditions. If the socializing and educational contingencies are an integral part of our life or culture that are unlikely to be abandoned or unlikely to be *easily* abandoned, then they may well have the same pragmatic force as constraints of nature.

It is not difficult to find an argument that can serve as a counter-example to his assumption. Consider the following:

(1) This educational institution is sexist in its educational practices. (This statement is to be regarded as a shorthand way of referring to a set of statements which report such practices as denying females certain curriculum options, excluding them from extra curricular activities, the use of sex stereotyped materials in classrooms, etc.)

(2) These sexist practices result in social injustices in the institution and entrench similar injustices in our society.

(3) Therefore, given the commitment of the institution to the eradication of social injustice at least within the institution, educators ought to undertake to change the relevant practices to afford equal educational opportunity to females and males.

In this argument, the factual claims of psychology do not describe constraints of nature. They document the social conditions in which education occurs, and this claim, along with a moral principle, yields prescriptions for educational practice that are logically legitimate and educationally constructive.

Although he offers no clear justification for the initial premise of his central argument Egan does provide an extended discussion of Piaget's theory which he takes to be supporting evidence of the second premise, viz., that no psychological theory at present describes constraints of nature. The essence of his argument is that although it is generally assumed that Piaget's cognitive developmental theory describes constraints of our nature on the development of certain forms of cognition, the findings are of dubious practical significance for education because the theory is "culture-bound." It only describes a state of affairs determined by the typical forms of social and educational initiation that children go through.

Egan points out that investigations show the following things about Piaget's theory:

(1) the theory may not describe a universal natural process;
(2) predictions about the stage-dependent restrictions on what can be learned are unsupported;
(3) the ordering of the stages is dubious;
(4) the distinction drawn between development and learning in the theory is insecure; and
(5) the descriptions of constraint may be no more than logical constraints on the development of understanding.

In short, Egan is contending that Piaget is describing a process that has been determined by past social and educational contingencies and if these contingencies had been different Piaget could have observed different things. The upshot of this is that it is a mistake to think that the theory can justify predictions about what can be taught, to whom, and how it can be taught to them. Such predictions, Egan claims, can only be formulated and justified by trying different ways of teaching. The suggestion that educators conform to the processes Piaget describes leads to an institutionalization of developmental norms not determined by our nature, but by past educational socializing practices. It is simply to reinforce a process appropriate to past conditions.

The second obvious criticism of Egan's argument is that this line of argumentation in support of the second premise is self-defeating. Egan cannot employ this kind of argumentation to demonstrate the truth of the second premise without having it, at the same time, demonstrate the falsity of the first premise. It is clear from the use Egan himself makes of empirical research that its interest and use to educators is not restricted to providing descriptions of constraints of nature. The empirical investigations to which Egan refers to document the "defects" of Piaget's theory aid in telling us what is *not* a constraint of nature, in distinguishing conceptual and empirical discoveries, and in suggesting certain conceptual truths. Though these empirical investigations do not describe constraints of nature, Egan—on pain of bad faith or finding his own paper boring—cannot admit that such work is not of interest to educators and of some considerable importance for educational practice.

But the central criticism to be made of Egan's argumentation for this startling and bold thesis is that it is plagued by ambiguity. In his discussion of the negative thesis the key phrases, "has implications for educational practice" and "constraints of nature" are both ambiguous. The interest of Egan's claims about the importance of psychological theories to educational practice trades upon this ambiguity, but equally their truth is cloaked by it.

In his paper Egan's use of the phrase "has implications for educational practice" is ambiguous. He uses this phrase in its ordinary sense meaning "is of some use in deciding what to do," as well as in the special sense meaning "shows us what it is impossible to do." Analogously, the phrase "constraint of nature" is used in the ordinary sense to mean "a limitation that is imposed by something that is necessarily the case," and in the special sense to mean "a limitation that is imposed by contingent conditions i.e., a limitation imposed by what is the case because of changeable educational and socializing contingencies."

Each of these contentious phrases acquires its special connotation in Egan's discussion of the limitations of Piaget's theory. Egan's correct claim about Piaget's theory is this: if some people think that Piaget's theory tells us what it is impossible to teach to certain people at certain times, then they are mistaken. Piaget's theory could only do this if it described what is necessarily the case about children's cognitive development. But it does not do this. Piaget's descriptions of what children understand, or how they come to understand what they do, are all dependent upon socializing and educational contingencies which could be different, and which might alter the understandings and understanding capabilities of these children.

However, it must be born in mind that Egan is only using Piaget's theory to illustrate defects he thinks all psychological theories share vis à vis educational practice and so he has to, at some point, state his argument in its most general form. But when the argument is stated so as to apply to all psychological theories the problems are obvious. The phrases "have implications for educational practice" and "constraints of nature" have their ordinary sense and if the argument is read with these ordinary senses it is subject to the criticisms I have already indicated.

The general point to be made is that while Egan's critique is just with respect to the influence of Piaget's theory the same argument could not hold against other psychological theories because people could not have the same misconceptions about these theories which have also influenced educational practice. For example, there is no misconception that behaviourist theories describe constraints of nature. It is clear that it is only contingencies that are talked about in these theories.

Hence, the bold statement of the argument concluding the negative thesis is unsound given ordinary meanings. Further, I suspect even if we fooled with the argument to give the crucial phrases consistent special meaning it would turn out to be unsound because the second premise would be false. There is not sufficient space to do this in this paper but the reader is invited to try out the various meanings to gauge for herself or himself the variations on interest and truth of the central claims of the argument.

Consideration of Egan's Positive Thesis: The Requirements of an Educational Theory

The more substantive issue I want to discuss in my response to Egan's paper concerns the adequacy of his characterization of the minimal requirements an educational theory must satisfy. My own strategy in making this appraisal of his views is one Egan should approve of. I propose to contrast what I, as an educator, want an educational theory to tell me with what Egan's theory about educational theories does, in fact, tell me. I want to know when I should reject an educational theory, and I want to know whether educational theories can meet, to an adequate degree, criteria I think any theory (educational or otherwise) must satisfy.

My hope in choosing this method of appraising his views is similar to Egan's hope. I want the procedure to be helpful in mining some gold. I want to encourage a more substantive clarification of the nature of educational theory. However, like Egan, I also want it to serve the more mischievous purpose of exposing fool's gold.

A debate between D. J. O'Conner and Paul Hirst concerning the nature and scope of educational theory raised the question of what standards educational thought must satisfy before it could be countenanced as a *bona fide* theory.[3] O'Conner insisted that if thought about education was to count as a theory it must have the following features:

(1) It must exhibit some unity. The propositions must be unified by the logical relations amongst its members.

(2) It must explain the phenomena that the theory is about. In the case of some types of theory such as moral theories, we may require that it have strong prescriptive power.

(3) It must be refutable.

It is O'Conner's view that if value judgements are considered as integral to thought about the practice of education, along with empirical components, then that thought will not exhibit a logic of the interrelations of these two components which is sufficient to allow it to satisfy the criteria of unity, explanatory or predictive power, and refutability, which are essential features of any theory. O'Conner avoids the problems of this logical confusion within educational theory by insisting that value judgements are extrinsic and that educational theory is essentially an empirical science. I think this is a bogus solution to the problem. I agree with Egan that education is value saturated, and the value "components" are integral to the theory. However, Egan's "solution" to the problem would be achieved by a rejection of the empirical components of educational theories and I think this, too, is a bogus solution to the problem.

Egan's positive thesis is that any adequate educational theory must satisfy the following requirements. It must be (a) developmental in form, (b) value-saturated, (c) prescriptive and (d) "formally falsifiable." Discussion of any one of these requirements would be a suitable entrée into critical appraisal of Egan's analysis of educational theories but a particularly useful one is falsifiability.

Since educational theories are about things we should do and bring about in the world, it seems appropriate that they should have some empirical content, but the exact specification of this requirement is troublesome to Egan. Since the prime aim of an educational theory is, according to Egan, "the characterization of new ideals and the practical steps towards achieving them," he claims that every educational theory must make at least one general empirical claim of the form "if you teach these things in this order in these ways then you will produce a person with these characteristics."

Egan quickly notes that one can expect empirical testing of such claims to be inconclusive and "practically impossible." The role of empirical research in falsifying these claims is reduced because of a confounding complexity introduced by two features. First, testing is difficult because the success of education depends in large part upon the agency of the learner and there are innumerable variables and inter-individual variations surrounding this. But the other, and to my mind more significant reason suggested by Egan to explain inconclusive testing, is the recognition that education is designed to serve differing and often competing ends. Despite these problems of refutability Egan still contends that educational theories can be at least "formally falsifiable," and that this condition of falsifiability will allow us to rule out tautologous programs, i.e., those "which claim success if a particular procedure is followed regardless of its results." Egan requires that an educational theory make one "formally falsifiable" claim "which distinguishes the product of its program from the process—making the latter causally responsible for the former, and making the former justify the latter." However, this analysis of a formally falsifiable claim is ambiguous. It glosses over the central difficulty which keeps educational theories from being falsifiable in any clear sense—the difficulty is to determine the interrelation between justifications which are *a priori* and those which rely on efficient production of chosen ends.

Elsewhere in his paper while reflecting on the complexity of the variables involved in the empirical claim Egan says, "Indeed an educational theory may systematically eradicate smaller scale empirical claims, and propose a program whose justification *at every step* is tied to the end product" (italics mine):

> For example, if the theory claims that young people should learn by active discovery methods, empirical tests which show this to be a very inefficient method compared with what happens when traditional instruction is used need have no effect on the theory's plausibility. Its proponents may say that learning by active discovery is not recommended on the grounds of efficiency in mastering quantities of content, but is justified in terms of the character of the end product which will result if such methods are used.

There are several problems with this argument by example. First, it is not an illustration of an educational theory eliminating empirical claims and justifying prescriptions by a different sort of appeal to the end product. It is an illustration which shows only that the end product is not what the critics understood it to be. Consequently, it leaves intact the logic of justification of the questionable prescribed activity. It is still justified as effectively productive of the goal one has which is the development of a certain character of the individual as opposed to having the individual amass a lot of content information. In short, it is an example showing only that the small scale empirical claim was a different one than the one that was challenged.

Despite the inaccuracy of the example, Egan is onto an important problem. The problem is that falsifiability presupposes a means-end abstraction will always be appropriate to the educational process and yet often it is not. The activities of education may be seen as constitutive of ends as opposed to means to ends. We might rule out certain procedures for dealing with children, such as indoctrination or conditioning; we would do so not because these procedures are inefficient in serving certain ends, but because of features of the actions themselves as opposed to their consequences. We may also as Egan notes, regard other activities as required not because they are means to an educative ends but because they are constitutive of the ends.

The general point is that in justifying educational practices different kinds of justification are frequently appropriate. We do see some activities as means to ends and others as constitutive of certain ends and so it seems we cannot insist on one analysis or the other as always appropriate.

Hence, we have the kinds of problems of refutability that O'Conner noted would come with any educational theory which acknowledged both empirical and value components. Certain value determinations may override empirical considerations of effectiveness but it is also true that considerations of empirical realization of certain educative ideals may alter our educational prescriptions. The problem is that we have no clear logic of the interrelations of these different kinds of considerations.

Egan's discussion of falsifiability is marked by certain inconsistencies. The juxtaposition of the two claims, that a theory must be formally falsifiable and that every step of the educational process may be justified (conceptually) by the end product reveals a confusion about the role of empirical knowledge in educational theory. The upshot of the discussion is not, as he claims, that the empirical claims are "practically impossible" to falsify or that they are "formally falsifiable." The upshot is that the claims are not empirical claims and not at all falsifiable in the ordinary sense of that term. We are left with a criterion of refutability that is too weak. In the end, on Egan's account, the refutation of an educational theory or the burden of testing an educational theory will come only from a conceptual testing for consistency, coherence, and plausibility and it is arguable whether this will make for interesting or useful educational theories.

Even the conceptual testing which Egan thinks should replace empirical testing is impossible without a good deal of empirical information. One major disagreement I have with Egan is not so much on the point of whether empirical information is needed for conceptual testing, he might well grant this, but on the question of what is the best source of this required empirical knowledge. In the first part of his paper Egan claims that psychological theories have not proved useful and interesting to date because psychologists have not taken as their focus of interest and investigation the sphere of concern of educators. If he is correct on this point, it is regretable and a reason for insisting on closer work amongst those in the educational arena, but it cannot justify the claim that the task of gathering the required empirical information is better left to common sense as he assumes.

Egan does not give us any good reason to think that common sense is any better at making the important observations and acquiring the relevant information to determine the plausibility of educational programs than psychologists if they turned their attention to these matters. His "argument" for this assumption consists simply of the observation that prior to Plato people noticed that there was a developmental progression in thinking from concrete perception-dominated thought to more abstract thought. This is not a paradigm example of an insight of common sense that might be useful to guide educational practice. One might inquire whether Egan's assumption of the insightfulness of common sense is itself an empirical claim or a conceptual one? Simply to call "insights" conceptual because they are derived from common sense will not relieve them of the burden of empirical responsibliity they carry within educational theories—that of determining whether the program meshes sufficiently with the realities of the world, the understandings of the learner, her way of conceptualizing her experience and the social conditions in which the educational program is to be realized.

It is reasonable to conclude that Egan's falsifiability requirement is too weak a requirement for any theory which purports to guide practical activity. The requirement is too minimal to guarantee a useful theory which is what Egan and I both agree educational theories ought to be. The central difficulty as I see it is that the clarity of his description of the *function* of an educational theory is not matched by a clarity in description of its *form.*

Egan correctly claims that the function of educational theory is to tell us what to teach, how to teach it, when to teach it and how to do it in a way that makes it interesting and meaningful to students at every step. But these general questions cloak a host of other questions answers to which are not easily arrived at by further elaboration of our goals and ideals. Such questions can best be answered only with information about the learner and the social conditions in which education is to occur. We want to know not just what is impossible to teach but what is difficult to teach, what are the *more* efficient methods, when does it make little difference what or how one teaches because of contingencies, and with what degree of effort are these contingencies changeable. It is difficult to make clear the interrelations of empirical information with the conceptualization of ideals and prescriptions, but the difficulty cannot be an argument for either dismissing the empirical information as useful, or for thinking that that information can be acquired through common sense. The guts of the educational enterprise lie precisely at this juncture and it is this activity which should be the focus of attention for those constructing theories of educational theory. It is the logic of this interrelationship which any educational theory should describe.

My wish is that Egan had been able to more positively characterize the relations between the value judgements he sees as permeating all educational decisions (about ends and means) and the empirical sciences, for it is only through a careful exploration of these relations that we can develop the kind of unity that characterizes a theory.

Egan's method of procedure is not the most heuristic. Identifying the concerns of the educator and taking his or her focus of interest in the educational phenomena is not a happy touchstone for discussing educational theory. The phenomenological complexity of problems expressed by the educator in the classroom is not necessarily a good clue to the logic of the interrelation of the theories one draws on to solve these problems. The description of just how empirical, philosophical, and value theories interrelate in educational theory may well differ for the identification of educational problems, the generation of possible solutions to these problems, the justification of their resolution and the coping strategies of the educator.

My very general point is that the interrelations are more subtle than Egan has indicated and that a theory of educational theories should make some attempt to carefully map these interrelations in a general way. My demand is for more precision than Egan offers, but of something far more complex than he acknowledges.

Conclusion

The conclusion I draw is that on Egan's characterization of educational theories they neither do nor will satisfy the criteria of unity, explanatory or predictive power, and refutability to an adequate degree, and so cannot, or should not, be countenanced as *bona fide* theories.

One could say that Egan's characterization of educational theories derives more from a fear of their failure than from a hope for their success. If Egan were convinced that educational theories would be more useful the greater the opportunity for them to be mistaken and to be *found* to be mistaken, he might have paid more attention to all the possible ways in which psychological theories and other empirical research influences their formation and testing. There is incentive to carry out this investigation, for the success of educators will likely be proportional to the refutability of their theories.

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1. All quotations unless otherwise indicated are from Egan's paper.

2. Strictly speaking the argument Egan advances is not a syllogism because it does not contain the proper number of terms. In order to pose the argument in a clearer and more obviously syllogistic form I have taken the liberty of altering the second premise, but not in a way that I think is at odds with Egan's intent.

3. D. J. O'Connor, "The Nature and Scope of Educational Theory (1)" and P.H. Hirst, "The Nature and Scope of Educational Theory (2)" in *New Essays in the Philosophy of Education*, ed. G. Langford and D. J. O'Connor (London: Routledge & Kegan Paul, 1974).

JUSTIFYING STUDENTS' RIGHTS: JOHN RAWLS AND COMPETING CONCEPTIONS

Victor L. Worsfold
The University of Texas at Dallas

Recently, the work of John Rawls[1] has proved something of a "happy hunting ground" for many philosophers of education. His theory has been found particularly helpful in addressing a variety of different issues,[2] including the adjudication of problems concerning the fair distribution of educational resources, the characterization of a theory of moral development and general questions concerning the purpose and conduct of education in the just society. This essay will, hopefully, contribute to this last set of questions, for in it I want to show why Rawls's theory of justice provides a more adequate framework within which to justify students' rights than others presently offered. Rather than offering another discussion on justifying students' rights *to* an education, this essay considers the not unrelated problem of the justification for the ascription of rights to students *in* the process of education. The issue arises in a Rawlsian framework, I believe, when one draws on Rawls's thinking about office-holders, that is, those in positions of authority, in the just society's institutions. For by applying what is entailed in the acceptance of a position of authority in the institutions of the just society by a Rawlsian office-holder to teachers, one arrives at the somewhat unexpected result of rights for students.

But I anticipate too much of the argument. The essay will begin with a brief outline of Rawls's argument concerning the conduct of institutions in the just society and move to a consideration of other constructions from which an argument for students' rights in education can be derived. The assumption underlying the essay is that if students are indeed to be ascribed rights in the practice of the educational process then there must be adequate grounds for this ascription. The essay will contend that Rawls's framework of justice provides such. Of necessity, the essay is exegetical in nature.

1. THE RAWLSIAN SCHEME

The theory of justice which Rawls has presented provides a context within which the authority which the concept of education demands teachers possess[3] can be legitimately ascribed to them. Rawls's principal argument, however, deals with the establishing of just institutions, and not initially with the ascriptions of rights and obligations to individuals. Nevertheless, as his argument progresses, individuals within an institutional structure have a right to the benefits which Rawls's principles of justice afford them. Rawls has argued that it is the capacity for accepting these principles, rather than the capacity's realization[4] which matters in deciding who is to count in the process of evolving these principles so that developing individuals—children—can, to the extent they are able, be amongst those involved in the hypothetical choice of the Rawlsian principles and are thereby parties to the social contract which secures adherence to the principles. Thus children qualify as members of the just society with, as a result, claims to fair treatment by the other members of the society. Where adults must decide on childrens' behalves, the interests of children are safeguarded by Rawls having insisted that adults must not justify their decisions by their ability to persuade children, finally, of the correctness of the decisions. Rather, adults must base their paternalism on the children's welfare at the time the decision is made, taking into account the children's own aims and preferences and demonstrating that the presumption of rationality, that is, the full ability to decide for oneself, is unwarranted on this particular occasion. The denial of children rights of their own, therefore, must be shown to be just by those who would deny them.

The implications of Rawls's argument that children are to be counted as parties to the initial contract to the extent they are able becomes clear once the applications of the principles of justice to particular individuals as they participate in society's institutions is understood. For, on the principle of fairness by which parties to the contract are required to do their part in maintaining just institutions, those holding office in these institutions are obligated to all such individuals. Just institutions do not coerce obligations from their office-holders. Rather, in Rawls's view,[5] the office holders' voluntary act of accepting the authority of their office gives rise to the obligation to fulfill the duties of the office. Whatever these duties are defines the content of the obligations. Teachers, in as much as they are entrusted with perpetuating the just society by inculcating its principles in developing individuals, clearly are in positions of authority at the behest of the agreement amongst individuals participating in the just society to establish the institution of education. Because children cooperate in maintaining the just society and its institutions in the way lately noted, teachers have an obligation to them as their students to fulfill the duties defining their office. It is important to understand, however, that such duties in the Rawlsian scheme are not viewed as moral duties but as "tasks and responsibilities assigned to the institutional position."[6] Nevertheless, teachers' acceptance of the principle of fairness in Rawls's scheme would provide a moral reason for their discharging the obligations their positions of authority involve.

To argue that teachers have obligations to their students, however, is to argue that students can make claims to fair treatment against their teachers as they educate. That these claims are just is derived from the assumption that the teacher originally accepted his or her position of authority within the framework of the mutually cooperative venture that is the just society. Failure on the teacher's part to submit to these olbigations while enjoying the benefits of the authority of his or her particular office—an office that depends upon the submission of others to restrictions of personal liberty—is unfair to the society in general and to students in particular. Indeed Rawls has declared that "those who have submitted to these restrictions have a right to a similar acquiescence on the part of those who have benefited from their submission."[7] But by averring that such an argument enables students to make just claims, following the logic of the notion of a right, we have in effect argued for students' rights to fair treatment in the educational process. For however the notion of a right is construed,[8] the idea of the right-bearer's making just claim on his or her own behalf is what provides the notion with significance in the practical world. Because they can make just claims against their teachers, then, students may be said to have rights to fair treatment in the educational process. What such treatment amounts to in practice is dictated by what the process of education is taken to entail. What the implications are for the relation between teacher and students of students having rights I have attempted to discern elsewhere.[9] That students possess rights in the educational process is the logical conclusion to adopting a Rawlsian construction of the office of teacher in the just society.

2. COMPETING CONCEPTIONS OF JUSTIFICATION

i. The Generational Argument

To begin the attempt to demonstrate the adequacy of this Rawlsian justification for students' rights we might examine the central idea inherent in the construction, namely, that the obligations of teachers which provide students their rights are intrinsic to the teachers' position in society and so their relationship to students. Thus teachers' obligations are not imposed from without their relationship to students. An example of just such external imposition on teachers can be derived from Olafson's argument for the general right of children to an education.[10]

Olafson thinks that there exists a generational duty to provide education for children imposed by the generational relation between parents and children. His thought seems to be that the sexual intercourse of parents, eventuating in the birth of a child, provides a moral basis for the child's right to an education. Now, following this line of argument, it might be averred that the exercise of authority which the teachers' position in the educational process connotes is legitimated by the imposition of that generational duty on teachers as they act on behalf of their students' parents. Teachers, then, would fulfill the generational duty incurred by parents, thereby making the necessary restitution of education to the present generation of children which Olafson believes parents are obligated to make by their having inherited an education from the previous generation. The imposition of such a duty on the educator can be challenged, however, by arguing against the framework of generational duties from which it is derived.

Borrowing from Melden's argument against Olafson,[11] the identification of the parental relation to the child, in which Olafson grounds the generational moral obligation to provide an education for the child, with the sexual relation in which parents stand to child, might be questioned. Olafson appears to be arguing that knowledge of the outcome of sexual relations between adults creates the obligation to provide education for the child. Such a view strikes us as highly responsible for it rests on the idea that parents are accountable for the fact that the child exists at their behest. Melden's remarks about Olafson at this point seem trite in comparison, for Melden wants us to imagine what thoughts individuals think as they are about to perform sex acts.[12] He suggests that one is not thinking at this time of passion, and even if one is and acknowledges the connection between intercourse and nativity, such acknowledgement does not make "that much difference." Olafson can reply, surely, albeit somewhat puritanically, that any notion of morality demands the accountability of individuals for their actions, so that any morally responsible person ought to have thought about the possibility of the birth of a child and the need to make provision for the welfare of such a being.

This response, however, raises a further philosophical difficulty, namely, how a right to education can be derived from what it is thought parents *ought* to do, and later we shall return to this general issue. To the specific case of the generational duty to provide an education for children, perhaps an immediate riposte to the Olafson reply is contained in Melden's later thinking.[13]

Rather than grounding such a crucial obligation in the sex act and knowledge of its causal relation, Melden would argue that we consider the whole parental relationship construed in terms of the ways in which parents conduct themselves towards their children, bringing them increasingly into mature life by their moral education, as the context within which to argue to the rights of children and the obligations of parents. In other words, Olafson, by choosing sexuality as the grounds from which to derive children's rights to education (and so, in our terms, the teachers' obligations to them as students), has simply chosen the wrong framework for his parental duty. When the generalized generational argument is scrutinized on its own terms, however, there are stronger reasons, I believe, for abandoning the attempt to impose that duty on teachers.

Melden claims he does not understand the generational argument at all.[14] He asks why generation B should make restitution to generation C for what it has received from generation A. Normally one repays the person from whom one received in the first place. For Melden once such repayment is made, the transaction between the persons involved is ended. For Olafson the generational duty of restitution turns out to be in Melden's colorful language "an unending series of passings of the buck."[15] We want to know what grounds there are to justify this continuous restitutional process, and whether these grounds, were they to exist, would establish a right for the members of one generation against another.

Using the analogy of the distribution of chocolates to children, it might be said that, provided the supply is abundant, it is inequitable to choose only those with red hair as the recipients of the chocolates. That it is said to be inequitable is the result of there being no evident reason to exclude those children who do not have red hair from receiving chocolates, the supply being abundant. Yet lack of equity at this point hardly violates *a right* of these children. They have no rights to the chocolates. And they have none because there is no contract between the chocolate donor and the children that each child is to have a chocolate. Likewise, Olafson does not provide for such an agreement between the members of generation B and the members of generation A to do for the members of generation C what the latter have done for the former. As a result, no generational duty can be derived between the generations and so none can be imposed on teachers acting on behalf of parents in the educational process. What Olafson's argument accomplishes for our investigation, however, is to point up the crucial significance of the contractual nature of the Rawlsian principle of fairness as the basis for an adequate justification of students' rights. The principle prescribes the obligation of teachers to sustain the rights of students in the educational process. It is the teachers' presumed agreement to the principle that makes this obligation intrinsic to the relationship with their students.

ii. The Argument from Natural Duty

Yet Olafson's argument does raise the possibility that teachers, like all adults, have a natural duty to children to provide them with education. Again, such a view might permit a justification for teachers' obligations to their students as they exercise the authority necessary to effect the educational process.

Rawls, however, is helpful in distinguishing between obligation and natural duty. For Rawls,[16] the duty to afford material aid, provided it can be offered without excessive risk to self, the duty to avoid harm or injury to another and the duty never to inflict unnecessary suffering are examples of what he conceives as our natural duties to one another. The distinguishing mark of these duties is that, unlike obligations, they are owed to individuals generally and not to any specific individuals engaged in a mutually advantageous practice. Natural duties in contrast to obligations are not the result of voluntary actions such as promises, so that the content of these duties is not defined by the rules of a particular social arrangement such as the rules defining the institutions of the just society. The difficulty with grounding teachers obligations, and thus students' rights, in such a duty is its generality.

To legitimate the obligations of teachers by the principle of fairness, on the other hand, is to make quite specific those who are bound to answer the just claims of students. Rawls has said, "the principle of fairness binds only those who assume public office"[17] so that teachers who acquire obligations in virtue of their office are tied more strongly by the scheme of justice to those to whom they are obligated (students) than those who merely have a general duty to uphold the demands of justice. It seems better, therefore, to justify teachers' authority in the educational process by reference to the obligations of their office which the principle of fairness entails. Indeed, somewhat paradoxically, it is Olafson who wants to insist that obligations derived from some "universal scheme of moral co-operation" are necessarily very weak since they will "inevitably lack the purchase on the individual assured in the case of duties based on special relationships."[18] Clearly, Rawls's construction provided for this kind of argument with respect to teacher and students, precisely.

iii. The Argument Based on Need

Perhaps a more obvious grounds for the justification of students' rights is the seemingly more educational one of need.[19] It is the simple realization that students are dependent on their teachers to meet their educational needs, it might be said, that justifies the possession of rights by students against their teachers in the process. Rawls's "mountainous" apparatus makes too much of this "mole-hill" fact and so becomes redundant. But surely students' rights in the educational process cannot be derived from their need of that process. Because they may argue that they have need of any spare change does not grant the hippies of Harvard Square a right to it. Similarly, students' needs for education cannot generate an obligation on those entrusted to provide it to meet those needs. Once more, there is, as yet, no background contract on the basis of which students can make just claims to having their needs met.

Nor will an understanding of the concept of need alleviate this difficulty. The most obvious way to begin an analysis of need is to note that the notion of need signals that a state of affairs, in this case education, is absent, or at least potentially so, for as Dearden points out "we agree that men need food without first enquiring whether anyone is actually without it."[20] But the absence or potential absence of something is not a sufficient criterion for a declaration of need. An individual may lack a certain ability, as in my own case, the ability to do mathematics, without thereby being necessarily placed in need of such an ability. The absence of something *per se* does not create a need for that something. A need is created when, as Dearden[21] says, what is absent *ought* to exist. Need, therefore, seems a normative concept dependent on what it is thought valuable for individuals to possess. Counter-examples to this idea are provided by some general survival needs such as those for shelter and water. But specific needs appear to be created by societal norms such as those for a minimum wage or health care. Indeed this thinking leads to the conclusion that there is a further criterion for legitimate needs existing, namely that what is thought to be needed really must be the relevant entity for fulfilling the dictates of the norm. Thus this analysis hinges once again on what it is thought ought to be done, and to date, we have left as problematic this kind of derivation. The simplicity of the justification for students' rights based on needs, therefore, is too beguiling.

iv. The Argument Based on Dependency

Unfortunately, the same impasse will be reached even if, as an alternative to the Rawlsian scheme, we salvage from the above argument the idea that needs create a dependency relation between teachers and students, and look to it as the basis for justifying students' rights. Commenting on a possible justification for non-abortion, J. J. Thomson[22] provides us with a somewhat analogous case. For Thomson thinks that many who have been concerned to claim the independence of the fetus as a grounds for the fetus's right to life, like any other independent being, "have tended to overlook the possible support they might gain making out that the fetus is *dependent* on the mother."[23] Such dependency might establish that a mother has a special responsibility for the fetus which justifies granting the fetus rights against her—rights which an independent individual would not possess.

This kind of argument contradicts the more commonly held view, enunciated by Rodham[24] as she discusses children under the law. Normally individuals are deprived of their rights in a dependency relationship because they are felt to be either incapable or undeserving of the right to decide on their own behalves. "The relative powerlessness of children," argues Rodham, "makes them uniquely vulnerable to this rationale...no other group is so totally dependent for its well-being on choices made by others."[25] Yet Rodham's solution to this dilemma is the one already attacked, namely, that the needs of children are to be asserted as rights, generating enforceable claims against society. Clearly it is more fruitful to pursue Thomson's argument that dependency may establish responsibility which generates rights for children. If her argument holds, then, by analogy we can argue that students' dependency on teachers for their education will generate rights for students with obligations for teachers to guarantee these. Such an argument would arrive at the same conclusion as Rawls, but much more simply.

On Thomson's argument, however, it would seem that, at best, only those pregnancies that eventuated from voluntary sex acts when pregnancy was the desired result would generate rights for unborn children. For only by building in conditions of voluntariness and wittingness on the part of the participants can the kind of attack we saw Melden mount against Olafson's remarks about these matters (and to which Thomson is, I believe, equally susceptible) be rebuffed. But the price for accepting these conditions is denying rights to those born as a result of rape or casual sex. And, indeed, Thomson is aware of this price when she is forced by the logic of her dependency argument to the conclusion that women must be told to have hysterectomies to avoid the possibility of having unwanted children by rape![26] Thus, the dependency argument, were it acceptable in itself, is not general enough to generate rights and obligations in all cases. That it is not acceptable in itself as yet, however, is the result of its basic appeal to what those who are dependent *ought* to receive from those on whom they depend. How else could dependency generate a notion of moral responsibility on the part of the latter group? Clearly, then, an investigation of the derivations of rights from oughts can be avoided no longer. One last example will be helpful.

v. The Argument Based on "Oughts"

Suppose an older brother is given a bicycle by his parents as a Christmas present. The boy rushes outdoors to try out his new treasure, totally forgetting his younger brother who looks on enviously. We can imagine the parents telling the older brother not to be so inconsiderate of his younger brother. "You ought to let your brother have a turn on the bicycle," they say, "because you ought to share things with your brother, especially at Christmas. That's what is expected of older brothers!" But suppose the older boy is unrelenting. His reply is that *he* was given the bicycle for Christmas, and so it is his to do with as he sees fit. Despite the aptness of his parents' urgings, his younger brother, he might declare, has no right to a turn on his bicycle. Such a reply may bring invective upon him—charges of callousness, thoughtlessness and even meanness—but the parents cannot accuse the older boy of injustice for the boy can rightfully argue that only he is *entitled* to ride the bicycle. Only by acknowledging this fact can a tight rein be kept on the situation establishing whose rights are at stake.

What the example is designed to show is that a justifiable right to fair treatment cannot be averred if mere moral sentiment is advanced as evidence for its ascription, even in such mundane cases as the above. The example illustrates why any entitlement to rights, and the obligations guaranteeing them, cannot be established without reference to some broader framework such as a comprehensive theory of justice to which all parties who must live under it can consent. Without such a framework with its underlying consensus, moral claims will continue to be merely a matter of assertion and counter-assertion, and rights, therefore, could not be grounds for action.

3. SOME CONCLUDING REMARKS, INCLUDING THE UTILITARIAN CHALLENGE

In the course of this essay I have been concerned to show why the Rawlsian scheme is a more adequate framework for the ascription of rights to students than those which question its validity by challenging the necessity for its existence. The internal structure of the framework itself has not been questioned so that no attempt has been made to evaluate the possibility that there might exist principles other than the principle of fairness which might generate students' rights. Utilitarianism in both its average and classical formulations presents an alternative principle as the basis on which rights might be assigned to individuals. For, on Barrow's[27] interpretation of the utilitarian view at least, an individual has a right to happiness, justified in terms of one or other of the formulations of the greatest happiness principle. Now, while it may turn out that utilitarian accounts of rights do not lead to social arrangements which differ much in actuality from those to be derived from the Rawlsian scheme, what is important is that the underlying justification for these arrangements clearly constitutes a counter-argument to Rawls's version of fairness.

Unlike the utilitarian, Rawls's notion of individual obligation within his scheme does not permit departures from its equality of application to all individuals to be justified on the basis of these departures leading to a greater sum of utility or average utility. On either view, to the extent that claims against those possessing obligations are dependent upon the utilitarian sum of advantages to be gained thereby, these claims are made to a moral notion of maximization to which the claim is understood to be subordinate. Students, then, would have rights only to the extent that they "did not militate against the greatest happiness of the greatest number," and they did "not actually cause a great increase of misery for the majority."[28] Rawls's view is designed precisely to avoid these kinds of discriminating caveats so that it can effect Bentham's doctrine of "everybody counting for one, nobody for more than one" by assuming each individual's happiness merits equal consideration with everybody else's. In Rawls's scheme this kind of impartial treatment comes to mean each individual deciding about his or her life to the extent that she or he is capable in accordance with an agreed-upon principle. Claims of right may be made by all and are respected by all in virture of their prior agreement to the principle of fairness. Thus students in exercising their rights can expect that their individual claims will be responded to on an individual basis. It is the creation of such an expectation that rights are all about, as Fried has recently reminded us.[29] The fault of the utilitarian doctrine is that it fails to account for the individuality which rights guarantee and instead "mistakes impersonality for impartiality."[30]

In the end, then, in order to effect respect for students, they, in the Rawlsian system of fairness, are accorded rights by the just society. Teachers because they hold their office voluntarily and by the consent of the members of the just society, including children to the extent they are capable, must guarantee these students' rights as the fulfillment of the obligations of their office. Students' rights then are no "mystic badges that exist *in vacuo*."[31] Rather, by being enabled to make just claims on their teachers, students are enabled to demand that they be dealt with as members of a community committed to the practice of education. Surely such a construct lends dignity to students, at last, based not on some element which they share in common-their birth, their needs, their dependency or a supposed moral duty towards them in virtue of their being—but on a prior agreement amongst all those who participate in the joint venture that is the just society. Their role in the process of education which is so crucial to the perpetuation of such a society cannot but be enhanced.

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1. John Rawls, *A Theory of Justice* (Cambridge: Harvard University Press, 1971).

2. Cf. Morris Sammons, "Self Respect and the Fair Distribution of Educational Opportunities"; Robert W. O'Connor, "The Justice Concept of Equality"; and Betty A. Sickel, "John Rawls's Theory of Maral Development." All in *Philosophy of Education 1977: Proceedings of the Thirty-Third Annual Meeting of the Philosophy of Education Society* ed. Ira Steinberg (Worcester, Mass.: Philosophy of Education Society, 1977).

3. R. S. Peters, *Ethics and Education* (London: George Allen & Unwin, 1966), Ch. IX, p. 239ff.

4. Rawls, *A Theory of Justice*, p. 509.

5. Rawls, *A Theory of Justice*, p. 113.

6. Ibid.

7. Rawls, *A Theory of Justice*, p. 343.

8. Various conceptions of rights have been offered recently. Cf. Joel Feinberg, *Social Philosophy* (Englewood Cliffs, New Jersey: Prentice-Hall, 1973); Bertram Bandman, "Is there a Right to an Education," in *Philosophy of Education 1977;* A. I. Melden, *Rights and Persons* (Berkeley and Los Angeles: University of California Press, 1977); Charles Fried, *Right and Wrong* (Cambridge: Harvard University Press, 1978).

9. Victor L. Worsfold, "Obligations and Rights in Education" (unpublished Ph.D dissertation, Harvard University, 1975).

10. Frederick A. Olafson, "Rights and Duties in Education," in *Educational Judgements*, ed. James F. Doyle (London: Routledge & Kegan Paul, 1973), pp. 173-195.

11. A. I. Melden, "Olafson on the Right to Education," in Doyle, ed., *Educational Judgements*, pp. 196-206.

12. Ibid., p. 201.

13. Ibid., p. 202; and Melden, *Rights and Persons, passim.*

14. Melden, "Olafson on the Right to Education," p. 202.

15. Ibid., p. 203.

16. Rawls, *A Theory of Justice*, p. 114ff.

17. Rawls, *A Theory of Justice*, p. 116.

18. Olafson, "Rights and Duties in Education," p. 176.

19. Cf. Reginald D. Archambault, "Needs and Education: A Philosophical Analysis" (unpublished Ph.D. dissertation, Harvard University, 1959).

20. R. F. Dearden, " 'Needs' in Education," in *Education and the Development of Reason*, eds. R. F. Dearden, P. H. Hirst, and R. S. Peters (London: Routledge & Kegan Paul, 1972), p. 52.

21. Dearden, " 'Needs' in Education," p. 52ff.

22. Judith Jarvis Thomson, "A Defense of Abortion," *Philosophy and Public Affairs* 1, 1 (Fall 1971): 47-66.

23. Ibid., p. 58 (italics in the original).

24. Hilary Rodham, "Children under the Law," *Harvard Educational Review* 43, 4 (Nov. 1973): 487-514.

25. Ibid., p. 493.

26. Thomson, "A Defense of Abortion," p. 59.

27. Robin Barrow, *Moral Philosophy in Education* (London: George Allen & Unwin, 1975), Ch. 6.

28. Barrow, *Moral Philosophy in Education*, pp. 144, 106.

29. Fried, *Right and Wrong*, p. 85.

30. Rawls, *A Theory of Justice*, p. 190.

31. Melden, *Rights and Persons*, p. 79.

RESPONSE TO WORSFOLD

Bertram Bandman
Long Island University

1. A Brief Summary of Worfold's Argument

In a subtle and forceful defense of students' rights, Victor Worsfold argues first, that teachers have obligations as office holders in a just society, second, that teachers' obligations imply students' rights to fair treatment, and third, that Rawls' framework is more effective than any alternatives for justifying students' rights.

Worsfold touches off five competing arguments which include (i) generational duties, (ii) the appeal to needs, (iii) dependencies, (iv) the derivation of students' rights from "oughts" and (v) the appeal to the greatest happiness principle.

According to the first thesis, Worsfold says that "teachers have obligations to their students." According to the second thesis, the role of "office holder" in a just society applied to teachers entails teachers' obligations to students and leads, he says, to "the somewhat unexpected result of rights for students."[1]

Worsfold spells this out by adapting Rawls' idea that (in effect holds that) "a mutually advantageous cooperative venture," such as a school run according to (certain) rules gives students who (voluntarily) submit to restrictions of their liberty—"necessary to yield advantages for all"—"a right to a similar acquiescence" for fairness from their teachers.

The steps in Worsfold's second argument that teachers' obligations imply students' rights are: (1) The Rawlsian principles of justice as fairness include obligations for office holders to provide a "a right to a similar acquiescence on the part of those who have benefited from their submission."[2] (2) "A right to a similar acquiescence" gives to those who submit, namely students, just claims for fair treatment. (3) Therefore, teachers' obligations to acquiesce to just claims for fair treatment are students' rights.

Since the assurance of students' rights depends on "adequate grounds," Worsfold contends that "Rawls' framework provides" such grounds (p.2), more so than competing challenges provided by appeals to generational duties, needs, dependencies, Good Samaritan obligations or to maximization of aggregate happiness. For Worsfold claims that a broader, more comprehensive framework is needed to justify students' rights than those provided by competing arguments.

2. Critique of Worsfold's Argument

I question Worsfold's three central contentions, (1) that teachers' have obligations as office holders, (2) that teachers' obligations imply students' rights, and (3) that competing challenges are not as effective in justifying students' rights as is Rawls' framework. I contend, on the contrary, that some challenges Worsfold cites and some he does not mention may be just as effective in justifying students' rights, assuming one cares to do that sort of thing.

2.1 First, I find it odd to justify teachers' obligations on the basis of their being "office holders." The teacher-student relation is a deep and binding, fiduciary relation almost like that between parents and children. I don't deny that teachers are office holders, but I don't think teachers being office holders is their primary relation to students, nor therefore the basis of teachers' obligations.

2.2 Second, a reason teachers' obligations do not imply students' rights is the familiar difficulty of deriving rights from duties. Rights imply duties, but duties, including generational duties or even "office holders" obligations do not necessarily imply rights. Joel Feinberg cites some examples of duties not correlative with rights, such as duties of compelling appropriateness, duties of self-sacrifice, duties of love, duties of charity and duties of *noblesse oblige.*[3] Neither of these duties implies corresponding rights on the part of beneficiaries. Whereas some duties may imply rights, such duties do not necessarily correlate with rights. Teachers' obligations, including responsibilities and tasks as office holders do not necessarily imply students' rights.[4]

Worsfold's contention that teachers and students are in a "mutually advantageous cooperative venture" in which students voluntarily restrict their liberties and that teachers' obligations as office holders gives students "a right to a similar acquiescence" from teachers who benefit from students' submission seems to fly in the face of teacher-student relationships. Students do not voluntarily restrict their liberties according to rules they agree to, at least not the students I know. Secondly, it is unclear what significant forms and examples of "a right to a similar acquiescence" students would have against teachers. It seems rather to be the case in schools almost everywhere that while schooling may be a "mutually advantageous cooperative venture," the teacher-student relation is asymetric. Students may evaluate teachers but not in the same way teachers evaluate students and it seems not entirely clear what a right to a similar acquiescence or submission by a student could mean to teachers in everyday schooling. Third, office holders may benefit from citizens' submitting to restrictions, but the beneficiaries of students' submitting themselves to restrictions are not teachers but students, analogous to patients being the primary beneficiaries of submitting to physician induced restrictions. Fourth, Plato points out in *The Republic* that being an office holder is a burden, not a benefit (to the office holder). For Worsfold to base his argument on Rawls' view of office holders seems a weak reed on which to base a justification of students' rights.

2.3 Regarding competing challenges, it is not so clear that accounts like Olafson's, Melden's, Dreardon's, Thomson's or Barrows' are attempts to justify students' rights. Worsfold's account of these competing challenges sidesteps the question as to whether students should have rights or whether either Rawls or his competitors are intending to provide competing frameworks for the purpose of justifying students' rights. There are also several attributions to one or more of these authors which are doubtful. For example, Thomson nowhere in the paper referred to advocates a dependency argument as a basis for attributing rights to persons; on the contrary, she dismisses dependency as a basis for attributing rights to persons, illustrated by the dependent violinist or the hungry younger brother, neither of whom has a right to another person's body or to an older brother's box of chocolates.[5] Moreover, Worsfold's bicycle example is exactly parallel to Thomson's example of the younger brother not having a right to share the older brother's box of chocolates. Among competing frameworks Thomson's will do just as well to make the very point Worsfold makes in deciding who has or who lacks rights.

2.4 One omission among possible competing frameworks is the absence of reference to two rather more formidable competitors for justifying students' rights than the five Worsfold presents to us. I have in mind the impressive, if not entirely defensible, framework offered by Robert Nozick, with its emphasis on individuals having rights. A second omission of a similarly impressive structure for justifying rights is Ronald Dworkin's *Taking Rights Seriously*, with its emphasis on the right to equal concern and equal respect.[7] It is also not so clear why one either needs or can rely on the big theory to justify students' rights. Some notable philosophers like H. L. A. Hart have recently expressed misgivings with the search for a comprehensive theory of justice. Perhaps smaller, more modest distinctions between rights and other values will do as well.

2.5 Closer to home, it is not clear why Worsfold does not derive children's rights to dignity, respect, self-respect, self-worth and autonomy from Rawlsian "primary goods," following the promising lead suggested by Barry Bull and Donna Kerr.[7]

A more serious omission, though, is the absence of examples of students' rights designed to reveal the threshhold or boundary as to where students' rights begin and end. Does a student, for example, have a right to know enough to build an atomic bomb in his back yard? Do minority students have a right to enter medical school even if their grades are too low for admission, on the grounds of affirmative action? I don't gain from this paper any cutting edge as to what rights students have or ought to have or ought not to have.[8]

Furthermore, it is not clear whether students have rights. Last year, Peter Goldstone provided a fundamental critique of rights on the ground that rights talk is rhetoric, not cognitive. If rights have no rational basis or if the case for rights is dubious, the grounds for justifying students' rights is undercut.

2.6 Rights and Privileges. Finally, I'd like to enter a few suggestions of my own, which because of time and space limitations I can only outline here, but which I've recently written about in a related connection. I offer these as an alternative to Worsfold's approach to students' rights. Students' rights, if there are any, are ringed round with restrictions and rules. Such students' rights are easily enough revoked that one may come to think of these not as rights but rather more pointedly and precisely as *privileges*.

Social roles, including those of teachers and students, gained by entering into mutually advantageous cooperative ventures, where examination pass marks, licenses, degrees and office holdings are earned, confer not rights but privileges.

On the view I prefer to defend, rights are not implied by duties, needs, dependencies, goals or principles, but by inclusion under more general rights. Children have rights because of their inclusion in the class of persons who have rights. Rights are not achieved by extension, tailoring or by being created out of special needs but by recognition of membership in the class of persons. The case for rights is made or pressed on behalf of new individuals and groups when they perceive, and also persuade others of, the essentially similar qualities between themselves and those who already have such rights.

To preserve rights it may make sense to say that children along with adults have rights because they are persons; and that in their special social role as students (or teachers) they have privileges which are revokable when they defy the rules, something one can't quite say with similar ease about rights.

In sum, it is proof enough of the splendid merit of Worsfold's frequently subtle-but also at times difficult to follow-paper that it provokes anything but silence.

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1. Worsfold concedes that Rawls' principles argument does not initially ascribe rights and obligations to individuals (pp. 2-3).

2. John Rawls, *A Theory of Justice* (Cambridge, Mass.: Harvard University Press, 1971), pp.112 and 343. See also H. L. A. Hart, "Are There Natural Rights?" in *Human Rights*, ed. A. I. Melden (Belmont, Calif: Wadsworth, 1970), pp.68-72, for a view that influenced Rawls.

3. I deal with the difficulty of duties implying rights and apply Feinberg's point to education in "Is There a Right to an Education?" in *Philosophy of Education 1977: Proceedings of the Thirty-Third Annual Meeting of the Philosophy of Education Society*, ed. Ira Steinberg (Worcester, Mass.: Philosophy of Education Society, 1977). See also J. Feinberg, "Duties, Rights and Claims," *American Philosophical Quarterly* 3 (April, 1966) :140-142.

4. Thomas Green also pointed to a similar difficulty in deriving rights from obligations in remarks at last year's PES meeting.

5. J. Thomson, "A Defense of Abortion," *Philosophy and Public Affairs* 1, 1 (Fall, 1971) :47-66, especially 54,56-58,60,61.

6. See also C. Fried, *Right and Wrong* (Cambridge, Mass: Harvard University Press, 1978), pp.213-214.

7. See Barry Bull, "The Connection between Education and Justice" and Donna Kerr, "Response to Bull," both in *Philosophy of Education 1977: Proceedings of the Thirty-Third Annual Meeting*, ed. Ira Steinberg, 1977, pp.235-242,243, especially 236-237 and 243-246.

8. I am indebted to Joshua Halberstam, friend and colleague, for suggesting the importance of students' rights examples.

CONSTITUTION AND BY-LAWS OF THE PHILOSOPHY OF EDUCATION SOCIETY

Constitution of the Society

Article I

Name

The name of this organization shall be "The Philosophy of Education Society."

Article II

Purposes

The purposes of this organization are (1) to promote the fundamental philosophic treatment of the problems of education, (2) to promote the clarification of agreements and differences among the several philosophies of education through the opportunities for discussion afforded by annual meetings, (3) to advance and improve teaching in the philosophy of education both in schools for the education of teachers and in other educational institutions, (4) to cultivate fruitful relationships between workers in general philosophy and workers in philosophy of education, (5) to cultivate fruitful relations between scholars in philosophy of education and those in other areas of education, and (6) to encourage promising young students in the field of philosophy of education.

Article III

Membership

Section 1. There shall be two classes of member: Fellow and Associate.

Section 2. A Fellow is one whose manifest interest and scholarly contribution is in the philosophy of education. The Executive Board shall take into account the following criteria in determining whether or not an application as Fellow will be approved: (1) publications in the field of philosophy of education, (2) the teaching of collegiate courses in this field, (3) the completion of a doctoral degree and dissertation in this field.

Section 3. An Associate is one who has a demonstrated interest and competence in philosophy of education but who does not meet the criteria for Fellow. Graduate students meeting these qualifications shall be eligible for membership as Associate.

Section 4. Both classes of members shall enjoy the right of the floor at all meetings of the Society and the right to vote on all matters that are decided by a vote of the membership.

Section 5. Nominations for membership as Fellow or Associate shall be sponsored by two members in good standing. Nominations for membership in the Society shall be submitted to the Executive Board and evidence shall be provided that the nominee essentially fulfills the qualifications for the class of membership to which he is nominated.

Section 6. A candidate properly nominated shall be accepted into membership by a favorable vote of at least four members of the Executive Board.

Article IV

Officers and Executive Board

Section 1. The elected officers of the Society shall be a President, a President-Elect, and a Secretary-Treasurer. Only Fellows of the Society may serve as officers. There shall be an Executive Board, the members of which shall be the elected officers of the Society, the immediate past President of the Society, and two members elected from the membership at large.

Section 2. The President-Elect of the Society shall be elected for a one-year term, immediately after which he shall automatically become the President of the Society for a one-year term. Any Fellow who holds these offices may not be reelected to succeed himself until after at least two years from his retirement as President. The duties of the President-Elect shall be to serve as a regular member of the Executive Board. He shall also assume the duties of the President whenever a majority of the Executive Board votes that the current President is unable to perform his duties.

Section 3. The duties of the President shall include (1) presiding at the annual general meeting, (2) appointing, with the approval of a majority of the Executive Board, a Program Committee for the year of his office and serving as *ex officio* member of that committee, (3) making appointments with the approval of a majority of the Executive Board to fill vacancies which may occur in the unexpired term of any office except his own, (4) supervising arrangements for the annual general meeting of the Society, and (5) proposing the names of nine members from which five will be chosen as members of the Nominating Committee in accordance with the By-Laws.

Section 4. The Secretary-Treasurer of the Society shall be elected yearly provided that a successful candidate may not hold office more than two years in succession. His duties shall include (1) maintaining records of the minutes of the annual meeting, of the deliberations of the Executive Board, and of the official correspondence of the Society, (2) collecting dues from the membership and executing the expenditure of funds for the Society, (3) circulating official notices to the members regarding time and place of meetings, new members accepted, and other matters of general concern, (4) conducting the elections of the Nominating Committee members, officers, other elected members of the Executive Board, and members of the Commission of Professional Affairs in the manner provided in the By-Laws, and (5) presiding at the annual meeting in the absence of the President and President-Elect.

Section 5. The Executive Board shall consist of the elected officers of the Society, the immediate past President, and two members elected to staggered terms of two years. The duties of the Executive Board shall include (1) passing upon nominations for membership in the Society, (2) authorizing and approving expenditures of the Society's funds, (3) acting upon any resignation submitted by officers of the Society, (4) deciding upon the time and place of the meeting of the Society, and (5) creating *ad hoc* committees as it may think appropriate to carry on the work of the Society. *Ad hoc* committees created by the Board may continue to stand beyond the end of the fiscal year succeeding the one in which they are formed only on a favorable vote of the membership at the first annual business meeting following their creation.

Article V

Commission on Professional Affairs

Section 1. There shall be a Commission on Professional Affairs the function of which is to examine for the Society all issues related to the conduct of its professional affairs, and in consultation with the President and Executive Board, to take relevant action, subject to review by the Society.

Section 2. Members of the Commission shall be the President of the Society, *ex officio,* and five members elected to staggered terms of five years from the membership of the Society. No elected member of the Commission may hold another elective office of the Society while a member of the Commission. Members shall be elected in the same manner as provided in the By-Laws for the election of officers of the Society.

Article VI

Amendments

This Constitution may be amended in whole or in part by the following process: (1) proposed changes in the Constitution must have the endorsement of at least two members and must be submitted in writing to the Secretary-Treasurer; (2) at least one month before the annual general meeting the Secretary-Treasurer shall mail to all members of the Society an account of the proposed changes; (3) discussion of these changes shall be an order of business at the regular business session of the Society during the annual general meeting; (4) after the annual general meeting the Secretary-Treasurer shall mail ballots concerning the aforesaid proposed changes in the Constitution to all members in good standing; (5) the proposed amendments which receive a favorable vote from the majority of ballots returned shall be incorporated in the Constitution. The Executive Board shall fix the limit within which ballots on the proposed amendments must be returned to the Secretary-Treasurer in order to count in the official voting.

By-Laws of the Society

I

Committees

The Standing Committees of the Society shall be:

1. A Program Committee of at least three members appointed each year by the incoming President. The President shall appoint the chairman of the committee. The program chairman shall supervise the editing of the *Proceedings.*

2. A Nominating Committee of five members who shall be elected in the following manner: At least four months before the annual business meeting of the Society the Secretary-Treasurer shall mail to each member a list of names of nine members of the Society selected by the President as candidates for the Nominating Committee. Each member shall be asked to vote for five of the persons whose names are on the list, and to return his ballot to the Secretary-Treasurer not later than three months before the annual business meeting. The five persons receiving the most votes shall constitute the Nominating Committee, and the Secretary-Treasurer shall notify the President of the names of the members elected. The President shall appoint one of the elected members chairman of the Nominating Committee. That committee shall confer immediately and, in accordance with the Constitutional provisions for eligibility, select two nominees for each place to be filled in a given year, except the Secretary-Treasurer may be nominated for a second term unopposed. The Chairman of the Nominating Committee must also seek suggestions for nominations from the Society's membership at large. At least one month before the annual business meeting a ballot on which is listed the names of the nominees for each place shall be mailed to each member of the Society. Ballots shall be returned to the Secretary-Treasurer prior to the annual business meeting, and the Secretary-Treasurer shall cause the ballots to be counted. The President shall announce the persons elected at the annual business meeting.

II

Meetings

The Society shall have at least one general meeting each year.

III

Affiliation

A Region may apply to the Executive Board of the Society for affiliation by submitting evidence that the requirements for affiliation have been met. To be eligible for such affiliation it must meet the following criteria: (1) Not fewer than three, preferably five or more, Fellows shall have constituted themselves into a Region. (2) A Region shall appoint a Regional Representative to the Society, and he shall be selected from among the Fellows of the Regional Society. (3) Qualification for membership shall be determined by the Region. (4) The Constitution of the Region shall incorporate the statement concerning Purposes from the Constitution of the Society.

The Region shall have the right to use the name of the Society on its letterhead.

IV

Dues

The annual dues shall be set, with the restrictions set out below, by a majority vote of the Executive Board, but no change in the amount of dues shall apply until the fiscal year following that in which dues are set. Dues generally shall be the same for Fellows and Associates, but the Executive Board may set dues for members retired from academic positions and for student members at such lower rates as it deems appropriate. Failure to pay dues for two years in succession is to be treated as a termination of membership. Former members may regain membership on the same basis as new applicants.

V

Fiscal Year

The fiscal year of the Society shall begin on July 1 and end on the next June 30.

VI

By-Laws

By-Laws of the Society may be changed by a majority of those voting at any annual business meeting of the Society.

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